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COMMUNICATIONS.

QUESTIONS IN THE TREATMENT OF INEVITABLE ABORTION.

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There are differences of opinion and also of practice in regard to the treatment of inevitable abortion, and especially of that form in which the expulsion of the ovum is incomplete. A brief discussion of some of these differences may not be unprofitable.

It is in many cases difficult, if not impossible, to know that the abortion is inevitable. If the hemorrhage be marked, and fragments of decidua are expelled, or if the ovum be felt at the os, the cervical canal having been so far dilated as to permit its descent, a conclusion often verified by the event may be made, that the pregnancy must be interrupted. And yet these symptoms do not justify the conclusion. For example, I have seen a patient at the third and also at the fourth month of pregnancy, have so profuse a discharge of blood from the uterus that a dozen napkins were required in twenty-four hours, and at times one of these napkins was saturated with blood; nevertheless, the pregnancy continued.

In general, it may be said that only in case the embryo or fœtus is dead, and a free rupture of the membranes has been made, or their extensive detachment effected, can the abortion be declared inevitable. The recognition of the death of the fœtus is possible if its life has been previously made known by auscultation; for, having once distinctly heard the sounds of the fœtal heart, and then failing to hear them again after careful and repeated examinations, the just conclusion is that the fœtus is dead. But in the majority of cases this evidence is not available, for the threatened miscarriage is present before the throbbing of the fœtal heart can be heard. A free rupture of the amniotic sac certainly will be followed by abortion; whether a mere puncture with only partial evacuation of the contained fluid will then result in all cases may be considered doubtful; for certainly not only cases of spontaneous rupture of the membranes, and also those of their puncture, in the latter weeks of pregnancy without labor coming on for some time after, have been observed. Even though the membranes have been punctured, or spontaneous rupture has occurred, the fact is in most cases not known to the practitioner. Again, it is rarely that he knows that large detachment of the ovum from the uterus has been made; while such detachment results in hemorrhage, yet, as before indicated, this symptom may occur, and the pregnancy continue. There are two proofs that the abortion is inevitable, which are available in those cases in which the two essential symptoms, viz., uterine contractions and flow of blood, continue for two or three weeks, or more, and these symptoms are, arrested development of the uterus and retrograde changes in the mammary glands. Now that the method of bi-manual examination as a means of obstetric and gynecological diagnosis is so familiar to the profession, it is not necessary to more

than refer to it as available for the recognition of arrest of that increase of size of the uterus resulting from the pregnant condition; in other words, if this organ ceases to grow, the embryo or fœtus is dead. Again, if the enlargement of the breasts, which usually begins at the first menstrual absence following conception, has occured, and these organs from having been full, plump, and possibly the seat of occasional pain, become shrunken, flaccid and painless, it may be regarded as almost if not quite certain that the pregnancy cannot continue. Here let a word of caution be said. In some cases, by no means frequent, it happens that the breasts after increasing in size in the first months of pregnancy lessen somewhat, and remain thus only partially developed until after labor. But this fact is not frequent, and the condition of the mammæ is by no means that which is observed following the death of the embryo or fœtus.

In threatened abortion we have no two remedies comparable to rest and opium; these are also invaluable in case the miscarriage is inevitable, and many observations have led to the conclusion that the pregnant woman bears opium remarkably well. By this means we lessen one of the dominant symptoms, pain, and indirectly by slowing the circulation, hemorrhage. But the means of especial value as a uterine hæmostatic is hot water injected into the vagina; of course the injections should be copious, and given if the discharge be great, at frequent intervals. One advantage that this treatment presents in abortion is, that it may be employed in cases in which there is hope of continuing the pregnancy—it does not excite uterine contraction so much as it does contraction of blood vessels. By these injections possibly we will render unnecessary in the majority of cases the administration of ergot or the application of the tampon; nevertheless ergot and the tampon are means which may become essential in the treatment, and they are probably most efficient if used conjointly.

Antiseptic vaginal injections should be used twice daily during the continuance of the abortion.

Of course if notable hemorrhage persists in spite of hot water, opium, ergot and the tampon, the indication is plain to empty the uterus by manual or by instrumental means, following the removal of the ovum by antiseptic applications—*e. g.*, injections into the uterus of a 5 per cent. solution of carbolic acid, or of 1 to 2,000, or 3,000 corrosive sublimate solution, or swabbing the intra-uterine surface with one of these solutions, or with the tincture of iodine, or the introduction of an iodoform tampon. Here let me say a word in regard to the effort to reject corrosive sublimate as an antiseptic in obstetric practice in consequence of mercurial poisoning having occurred in a few cases. In only two of many cases in hospital practice in which 1 to 2000 corrosive sublimate injections into the vagina and into the uterus were employed, have I seen unpleasant consequences result; and these consequences ceased upon discontinuing the remedy. I believe if the uterus and vagina are thoroughly emptied after the injection, none of the fluid being left behind for slow absorption to occur, by following it with an injection of water that has been sterilized by boiling, no injurious results will be seen. Nevertheless it is advisable in all cases where corrosive sublimate solution is used, either in connection with abortion or after labor, to observe from day to day the gums, and the moment these are found red and swollen, to at once discontinue the solution.

As to methods of emptying the uterus in incomplete abortion, that in which only one or two fingers, first carefully made aseptic, are employed is the best; the patient lies upon her back and the physician places one of his hands upon the abdomen to press the uterus down to the fingers of the other hand so that they more readily enter its cavity. If instrumental means be required my preference is for Emmet's curette forceps, if the abortion be within the first ten weeks of pregnancy; many, however, employ a blunt curette.

I hold too, that evacuating the uterus is clearly indicated in incomplete abortion, not only by such hemorrhages as have been mentioned, but by an offensive discharge, for such discharge may foretell septic infection. Many excellent authorities, more especially of the German school, advocate immediate emptying of the uterus in all cases when a part of the ovum remains. Now the objections to this are: First, there may be a twin pregnancy, and one ovum may be expelled and the other retained until complete development is accomplished, and thus the operator in assisting one abortion makes a second one. Second, there is danger of causing a traumatism either in the dilatation of the cervical canal, or by the use of the curette upon the uterine wall. Third, it should be remembered that the uterine decidua, the *decidua vera*, is not fused with that covering the ovum until some time in the fourth month, but is quite firmly united to the

uterine wall; abrupt detachment of it is a violence which may produce more serious consequences than those which result from its gradual breaking down and discharge, nature's method of casting it off.

Let it be called conservatism, if any one chooses, nevertheless my faith and practice are in cases of incomplete abortion to wait, if the os be closed, until the symptoms which have been mentioned occur—without one or both of these, no interference, but an armed expectation and the regular use of antiseptic vaginal injections. It is worthy to be observed that the advocates of immediate interference sustain their position by adducing instances in which continued hemorrhages, or offensive discharges, and even septic infection followed delay in emptying the uterus. Certainly, and cases presenting such symptoms demanded earlier interference; if the practitioner had been wise enough to be warned by the first two, and proper response was made to the warning, the third would scarcely be known. The multiplication of cases of early incomplete abortion in which hemorrhage persisted for weeks, and then fragments of membrane or of placenta being removed the patient got well, do not prove that the practice of immediate interference, that is the artificial complete removal of the ovum is demanded in every case of abortion in which spontaneous expulsion does not occur. Certainly there are advantages in a prompt and perfect deliverance, but it is not exempt from dangers if violence is used in effecting it, and in some instances it may abruptly end a pregnancy which under other practice might continue to its normal termination. The advocates of immediate interference claim the best results. Carlyle has said, "Granted, the ship comes into harbor with shrouds and tackle damaged; the pilot is blame-worthy, he has not been all-wise and all powerful; but to know *how* blame-worthy, tell us first whether his voyage has been round the globe, or only to Ramsgate and The Isle of Dogs." So we would like to know the number of cases treated in this particular way prior to giving an opinion as to its value. Further, before the question can be finally settled, a sufficiently large number of cases thus treated must be compared with a like number in which no interference with the process, so far as the uterus is concerned, is made without symptoms require it. Of course at the time of the miscarriage make it complete if possible without injury to uterus—let the interference be digital rather than instrumental, unless the former fails and hemorrhage persists; but that time passed and part of the ovum being retained, the os closing, I believe it better to wait until distinct call for action is given. There is a middle ground between immediate intervention and absolute expectancy; and in that ground, my faith is, the path of safety lies.

One of my most valued professional friends, an able, conscientious and distinguished practitioner, in reference to this special view of the treatment of abortion, as well as the management of labor, has written me that my methods are too artificial and I do not trust enough to nature, adding, that in a practice of fifty years—and I know that during a great part of that time his practice has been large—he has not lost a single woman as a consequence of labor or from miscarriage. I do not know, but it is quite probable this gentleman has attended 2,000 cases of labor, for as the result of observation and of inquiries my conclusion is that the general practitioner, even if his practice be large, does not have more than an average of forty cases of confinement a year. Of course there are exceptions, some devoted exclusively to obstetric practice, or connected with maternities, or having a large *clientele* of the poor, or at least of those in very moderate circumstances, may count in the course of their professional lives three or four thousand obstetric cases. But for one who can thus number his cases, there are ten who are under the average that has been mentioned. If one were to take the extravagant and improbable statements of some few physicians, who we will suppose guess at a number and multiply it by two, so that nothing shall be lost as to the number of labors they have attended, and then make it the standard for the profession in general and for midwives, the population of this country would be increasing in such a frightful ratio that Malthus would not rest in his grave, or else there would be a slaughter of infants in comparison with which that by Herod was infinitesimal. In this department of obstetric statistics I believe there are more unfortunate mistakes than in any other.

Returning from this digression, the number of abortions attended by one who has had charge of 2,000 cases of labor will be not less than 250, or according to some estimates of the relative proportion between miscarriages and labor at term, even 600 or 700. Bush's proportion is 1 to 5.5; Whitehead's 87 out of 100, and Hegar's 1 to 8. Taking the smaller of the numbers mentioned, there certainly is a strong argument

for the expectant treatment of abortion in the fact that 250 thus treated recovered.

But I do not want to urge such treatment as invariably the best, for expectation has its limits, the definition of which this paper has endeavored to present.

ACETONE AND DIACETIC ACID IN THE URINE.

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The detection of these two substances in the urine and the comprehension of their clinical significance, is more and more becoming, not a matter of purely scientific interest only, but one of practical value.

ACETONE.—Acetone is a colorless, volatile fluid, with the chemical formula C_3H_6O. It is formed in nature only in the animal organism, and is found there in very minute quantities under physiological conditions. The amount is so minimal that it may be disregarded for clinical purposes.

There are several chemical tests for acetone, but as nearly all of them need to be applied to the distillate from the urine, and are, therefore, too troublesome for every-day use, I shall only describe that of Legal, which is: dissolve a few crystals of sodium nitro-prusside in a little hot water in a test tube. Add some drops of this to the urine to be examined, and then make the mixture distinctly alkaline with an excess of liquor potassa. A red color is at once produced, but fades after a short time, and has no significance whatever. After it has disappeared add a few drops of acetic acid, whereupon, if acetone be present a deep violet or brownish-purple color will appear wherever the acid has penetrated. The color often developes slowly, and becomes more intense in the course of a few minutes.

This test is not difficult for small amounts, but it is the only one which we can use with the urine itself.

Pathological acetonuria, *i. e.*, where the amount exceeds gr. 1-6 in the total quantity of urine passed in the 24 hours, may be divided into several classes, following somewhat the classification of Von Jaksch:

1. Febrile acetonuria.
2. Diabetic acetonuria.
3. Acetonuria of carcinoma.
4. Acetonuria of inanition.
5. Acetonuria in certain psychoses.
6. Idiopathic acetonuria.

All cases of continued high fever, of whatever nature, are accompanied by the presence of acetone in the urine, and the degree of acetonuria corresponds largely to the elevation of temperature. Diabetic acetonuria is another very common form. It appears to have no relation to the degree of glycosuria. Its development in diabetes is sometimes ushered in by headache, loss of appetite, disordered digestion, a sense of weakness and other unpleasant subjective symptoms; but these soon disappear, though the acetonuria persists. It seems to be without clinical significance, except that it is more apt to occur in grave cases, and is a frequent precursor of diacetic acid in the urine. Acetonuria is not infrequent in carcinoma of the stomach and bowels, even before cachexia develops. Its onset is accompanied by symptoms similar to those seen in diabetic acetonuria. Cachexia probably develops earlier in those cases in which an abnormal amount of acetone can be detected. Inanition from whatever source is very often accompanied by large amounts of acetone in the urine. This substance has also been detected in the urine in certain instances in psychoses attended by great mental excitement. The sixth class contains those cases in which there is an auto-intoxication by acetone. They are instances of acetonæmia, and though they occur with great rarity, it is well to be on the lookout for them. They are characterized in some cases by restlessness, excitement, and delirium, and then by coma and death; while no cause can be ascertained, but the urine is found loaded with acetone. In other cases there is extreme languor and other indefinite symptoms. In a few instances reported by Von Jaksch epileptic attacks have appeared, dependent solely on the presence of acetone in the system.

DIACETIC ACID.—Diacetic acid is chemically not far removed from acetone; but its clinical significance is far different, and its presence in the urine is a most dangerous complication. It is a compound of acetone with one of the organic acids, probably formic acid. As it is very readily decomposed into acetone and carbonic di-oxide, the urine obtained for examination must be as fresh as possible.

The test for diacetic acid is very simple. If a few drops of a solution of the chloride of iron be added to urine containing the acid, a Bordeaux-red color will be at once produced. The urine will also *always* answer readily to the tests for acetone, since in the decomposition produced by the addi-

tion of the test-reagents for this latter substance acetone is produced and the diacetic acid is destroyed.

But the matter is not quite so simple as would at first sight appear, since numerous other bodies may at times occur in the urine and produce the same red color. The fact is especially to be noted that the urine of patients to whom thallin, antipyrine, salycilic acid and carbolic acid has been administered will give this reaction. The following procedure is therefore to be advised: Add a few drops of the iron solution to some quite fresh urine in a test-tube. If a very heavy precipitate of phosphates occur, filter this and test the filtrate again. If the Bordeaux-red color is produced, a portion of the urine is to be boiled and another portion acidulated with sulphuric acid and shaken with ether. If the red color soon disappears on boiling the urine in which the test has already been made; if it occurs not at all or but faintly in the urine prepared by boiling; if finally the red color produced by testing the ether extract fades within 24 hours, while at the same time the reactions for acetone in the native urine are very distinct, we have to do with diacetic acid. I wish here to call attention to a mistake still frequently made with reference to this substance. For example, in a clinical lecture by a very well known clinician, reported in one of our medical journals not many months ago, the lecturer referred to the well-known *red color produced by acetone* when a solution of the chloride of iron is added to the urine containing it. It is true that some years ago it was supposed that acetone gave this reaction, but we now know that it is an entirely different substance.

The same classification of diaceturia may be made as in acetonuria:

1. Febrile diaceturia.
2. Diabetic diaceturia.
3. Diaceturia of carcinoma.
4. Diaceturia of inanition.
5. Diaceturia in certain psychoses.
6. Idiopathic diaceturia.

Diaceturia accompanying continued high fever is rare in adults, and indicates that the disease will probably run a malignant course. In children it is more common, and possesses no unfavorable prognostic value. Diabetic diaceturia is a most unfavorable symptom, and is the precursor of diabetic coma. It is sometimes ushered in by depression and a disposition to sleep; coma may at once follow, or the symptoms may disappear though the diaceturia remains, and the patient is liable at any time to develop coma and die. Usually there is no relation between the diaceturia and the degree of glycosuria. Diaceturia in carcinoma may also occur and lead to coma. It has also been rarely seen in certain psychoses and in states of inanition. Idiopathic diaceturia, in which there is an auto-intoxication from the drug, is rare in adults, and a highly dangerous condition. It begins with vomiting, restlessness and dyspnœa, and terminates in coma and death. In children it is oftener seen and is usually of less import. Constipation and vomiting, with a thickly coated tongue are present, attended by an enormous quantity of diacetic acid in the urine.

Clinical and therapeutical indications.—The clinical indications have been already discussed. The presence of acetone in the urine need, as a rule, cause no special anxiety. The occurrence of diaceturia, on the other hand, is always a grave symptom except in some cases in children. It is very important to know of its presence, on account of its prognostic indications. In the present state of our knowledge we are unfortunately unable to hinder the development of diacetic acid in the system, or to remove it when formed. Neither diet nor drugs have any effect on it.

Lépine disputes Von Jaksch's claim that diacetic acid is the cause of coma in diabetes, and believes that it is B-oxybutyric acid which is at fault. It is certain that the two substances are chemically very closely allied; but unfortunately the experiments with intravenous injections of a solution of sodium bi-carbonate with the object of preventing the production of B-oxybutyric acid and the development of coma have not been attended with signal success. So whatever may be the true cause of the coma, we are as yet unacquainted with means to prevent it.

As acetone, and hence also diacetic acid, is supposed by some to arise from the decomposition of albumen, it would be well in all cases of auto-intoxication with either to empty the bowels by means of a purge, on the ground that the poison is possibly being absorbed from the intestinal tract.

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—A medical journal says: "The application of a bit of ice to the lobe of the ear will stop hiccoughing." All a man who is accustomed to hiccoughing has to do, then, is to carry a bit of ice about in his waistcoat pocket, and he can cure himself instantly.—*Chemist and Druggist.*

TOBACCO; SAFE AND UNSAFE METHODS OF EXHIBITION.

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The authors and compilers of the United States Dispensatory were gentlemen of the highest attainments, and did not fail in properly estimating the delicacy of their task of assigning to each article of the Materia Medica its just rank as a curative agent; nor in pointing out the line at which it ceased to be beneficial and verged toward danger.

The desire of retaining in the list a drug which was capable of much good in the hands of the prudent and experienced, led them to hedge about certain articles in such a way as to impel the cautious to err by excess of prudence; but this anxious care had little effect in deterring the inexperienced, the bold, and the rash from risking everything in the hope of signal and triumphant success.

There is no drug included in the Materia Medica of which it is more necessary to be careful in regard to its introduction into the human system, a carefulness which shall result in the absorption by the tissues of just the amount required to accomplish a therapeutical result and no more, than tobacco. There is one method of exhibition spoken of by medical writers, in which this exactness can rarely be attained; in which the drug once given passes from the control of the person administering it, and is liable to cause the gravest condition, even death; I mean the injection of the infusion into the rectum.

Though this form of application is mentioned by the late Professor George B. Wood as permissible, the warning which he gives shows his fears as to its use. It would have been better, perhaps, if his sanction had been withheld, or that his admonition had been set in the boldest type. With this permissive sentence eliminated from the text, and the word "or," which follows, the directions may be pronounced admirable: "As a narcotic it is employed chiefly to produce relaxation in spasmodic affections. For this purpose (the infusion or smoke of tobacco, or), the leaf in substance, in the shape of a suppository, is introduced into the rectum in cases of strangulated hernia, obstinate constipation from spasm of the bowels, and retention of urine from spasmodic stricture of the urethra."[1] He adds this wholesome advice, which is of the highest importance, and should receive the gravest emphasis: "It should be used with great caution. This remark is applicable to all the modes of using tobacco, particularly to the injection of the infusion into the rectum."

There is no suggestion in the dispensatory article of an antidote to tobacco, and the measures to be taken in case of poisoning by it are stated in very few words. As they occur at the close of a long paragraph, they do not stand out as distinctly as is desirable: "In cases of poisoning from tobacco, the indications are, after evacuation of the poison, to support the system by external and internal stimulants, and to allay irritation of the stomach by opiates." The directions of Pereira are fuller and more specific: "If the poison has been swallowed, let the contents of the stomach be withdrawn as speedily as possible. No chemical antidote has been demonstrated, but the vegetable astringents (infusion of nutgalls, green tea, etc.) deserve attention. As anti-narcotics, the vegetable acids and coffee may be administered. When the depression of the vascular system is extreme, ammonia and brandy may be administered with good effect, and frictions employed. Artificial respiration should not be omitted, when other means have failed."[1]

It may be here stated that tannin, the active principle of the vegetable astringents mentioned by Pereira as worthy of attention in counteracting the effects of the poison, is claimed by some authors as a chemical antidote to nicotine.[2]

So little is tobacco used by medical practitioners of the present generation, that few of them, perhaps, have witnessed the utter relaxation which it produces in the human system—an unharnessing, so to speak, of the muscular apparatus, which follows the administration of no other drug. While yet young in the practice of my profession, I encountered two desperate cases of incarcerated hernia, which called for the most powerful relaxant known to medicine. I chose tobacco; and was happy in eschewing the infusion, and using the leaf,—the ordinary cut tobacco—as a suppository. The results, I cannot but esteem brilliant, even in the light of the appliances of the present day,—relief being obtained in a very short space of time. On one occasion, in which a hernia in one of the cases referred to had resisted for many hours the best directed efforts of some capable physicians, I was pleased to find the protrusion released within an hour by the aid of

[1] *United States Dispensatory.*

[1] Pereira, *Materia Medica*, Philadelphia, 1845.

[2] *Lersch*, quoted by Von Bœck: Vegetable Poisons, Art. Nicotine: Von Ziemssen's Cyclopædia.

the suppository. So complete was the paralysis of the sphincter ani, that it had released its grip of the tobacco, which was found lying outside,—the anus being open sufficiently to admit a finger. The application had proved to be self-regulating,—coming away when no longer needed. The amount of the drug used was about sufficient to fill the bowl of the common smoking-pipe,—estimated at 12 grains. The particles were held together by threads wrapped about them,—the ends of which being allowed to protrude afforded a suitable means of withdrawal. Professor Henry H. Smith showed his class (1868–9) how to use the "fine cut" wrapped in lace-like tissue.

In the MEDICAL AND SURGICAL REPORTER, March 24th, 1860,[1] I related two cases of strangulated hernia to which reference has already been made, in which the incarcerating structures gave way under the use of the tobacco suppository. They are very striking, and I think, instructive cases; and, as they will be new to the greater part of the present race of practicing physicians, I take the liberty of reproducing them.

J. C., aged 75 years, had an inguinal hernia of long standing. It became incarcerated on the 29th of August, 1854. The size and tension of the tumor were extreme. All known methods of reduction unsuccessfully exhausted, I introduced a suppository of tobacco. In a short time, the tumor had palpably relaxed, and soon entirely yielded. On the 4th of September following, he had a relapse. By all the usual means, skillfully and perseveringly applied by two neighboring practitioners, together with the exhibition of chloroform, it proved wholly irreducible. I saw him at 4 o'clock P. M., and determined to try the remedy which had once before relieved him. In about one hour from the employment of the suppository, the tension was so much lessened, that a considerable part of the protruded mass was returned by taxis; and soon after, whilst waiting events, the remainder of the tumor spontaneously subsided.

J. M., aged 70 years, has also had inguinal hernia from youth. Twenty years since, it became strangulated, and relief was obtained by an operation. In November last [1859,] at 7 o'clock A. M., he had a protrusion, and was unable to return it. He was at once seized with excruciating pain in the abdomen. In his own nervous language, "the pain went right to his heart." Syncope followed, and he lay as one dead; and such his friends reported him. On my arrival, at 11 o'clock A. M., he lay motionless and deadly pale. Consciousness had returned, but his breathing was imperceptible. His pulse was soft and regular. The tumor equalled in size the head of a new-born infant. It was tense to the last degree and elastic. The patient was confident the operation must be repeated, and accepted that as an alternative. After trial by taxis, sufficient to prove its utter inefficiency, I applied the tobacco, and calmly awaited restoration. In about an hour, the incarcerated part was liberated; and, unassisted, swept into the cavity of the abdomen. There were no unpleasant sequelæ in either case.

All the cases reported of poisoning by this drug have resulted, so far as I have learned, from faulty methods of exhibition; or, from the use of an inordinate dose. In the cases stated by Pereira,[1] as coming under the notice of Sir A. Cooper, Sir Charles Bell, and Dr. Copland, one drachm in clyster proved fatal, in each case. Pereira also relates that a half-drachm in infusion has caused death. Desault has seen a like result from an enema of the smoke of tobacco. The infusion of tobacco[2] is made by adding one pint of boiling water to 60 grains of tobacco, macerating for one hour and straining. The direction is: "Only one half of the pint of the U. S. P. infusion should be employed at once; and, if this should not produce relaxation in half an hour the remainder may be injected."

Pereira says, "The cautious practitioner will not use more than 15 or 20 grains." If he be wise, as well as cautious, he will avoid both the infusion and the smoke,—employing only the leaf. This can be watched, and removed when no longer useful; and any liability to excessive action be thereby averted.

[1] Vol. iii, p. 559.

[1] *Materia Medica, loc. cit.*

[2] *United States Dispensatory*, 13th edition.

GALVANO-PUNCTURE IN TUBAL PREGNANCY.

BY WILLIAM R. D. BLACKWOOD, M. D., OF PHILADELPHIA.

I have, in various published papers, referred to the dangerous method under which electricity is used in Europe in extra-uterine pregnancy, and more particularly to the dependence placed upon *galvano-puncture* in England. The whole subject of electrolysis in ectopic gestation is apparently enveloped in Great Britain in a fog as impenetrable as

that which our London confreres are favored with so often through their unique atmospheric peculiarities. It is believed that the typical highlander's cranium is impregnable to the reception of new ideas short of a surgical operation, and it would appear that no amount of clinical evidence, as furnished from this country is of any value to the average British practitioner toward establishing the certainty of result, and the safety of procedure, in destroying the embryo in ectopic gestation up to say, the fourteenth week. After that period undoubtedly laparotomy is the correct thing to do. A recent contribution to the *British Medical Journal*, by Dr. Percy Boulton, physician to the Samaritan Free Hospital gives particulars of a case, the nature of which beyond doubt was that of ectopic gestation at about eight weeks. After watching and consultation with other physicians for a month, during which time the tumor necessarily grew much larger, electrolysis was decided upon as the remedy. Three curved needles long enough to reach the tumor and to extend outside the vagina (but how thick is not stated,) were introduced. The needles were coated with shellac (all except an inch and a half of the pointed ends) as the insulating medium, and the positive pole was connected with them, the negative being applied to the thigh of the patient and "moved about for the space of six minutes." Difficulty was experienced in removing the needles owing to their roughening under the current from thirty Stohrer cells. The subsequent history is that of peritonitis, death ensuing in twenty days.

I do not think there is much room for doubt as to how the fatal result was brought about. No attainable coating with shellac will insulate needles under the circumstances narrated. The roughening resulted from scaling of the cover together with deposition on the purposely exposed points as is usual in puncture, for example, in aneurismal sacs. Unless adhesion through inflammation existed (which is not stated), it is probable that the peritoneum was wounded, and it is possible and probable that six such points were created by the needles all of which were exposed to the caustic action of the current. Moreover the tube was weakened by the puncture and opportunity given for escape of contained or resultant fluids into the peritoneal cavity. The doctor himself thought that rupture took place after suppuration.

The opinion is given in the article that galvanization without puncture would involve four or five daily applications of half an hour each from say twenty cells. Further, the fear is stated that any "shock which would kill a fœtus of four or five months would endanger the life of the mother." Again Dr. Steavenson is quoted as follows: "A powerful electric shock causes the death of the adult by its stimulation of the inhibitory fibres of the pneumogastric (?); but a fœtus has no inhibitory apparatus, at two or three months, at any rate the nervous apparatus is not fully differentiated, and it is probable that a shock would affect the mother rather than the embryo." The reasoning throughout the article is based on the ideas above quoted.

In considering the subject it occurs to me that with all due deference to Steavenson, First, He is wrong in his opinion that a fœtus has no inhibitory apparatus; just as women are who claim that there is no life in the embryo early in its development, therefore no wrong is done in murdering it. I tell such women that if it is not alive it won't grow, and they needn't care. At three months a fœtus *has* inhibitory fibres, minute enough to escape our observation no doubt, but all the same they are there, and they grow. Not only is differentiation obscure in its nervous development, but also fœtal tissues are of necessity very immature, and it is because of this low grade of development that electricity is so powerful an agent in destroying its vitality. The term "shock," as popularly understood, is not applicable to electrolysis as now considered.

Two methods are open to us in studying the therapeutic effect of remedies—the theoretical, and the experimental or practical. Before I ever treated an extra-uterine pregnancy personally, I knew from repeated experience just how an accidental, powerful shock in the way of instantaneous static discharge affected me, and I imagined that the disruptive effect from a Leyden battery would be exactly the thing for the occasion. Unfortunately static electricity has a will of its own, and unlike dynamic electricity it is hard to restrain within given lines. Many a time sparks would skip around upstairs from telephone and bell circuits to the sewing-machine or other metallic object when I was using the static machine in my office, and yet everything is insulated thoroughly. Consequently I would not rely upon this form at all. Faradism, on the other hand, is controllable, and will produce all the effects obtainable from static electricity; therefore, when my chance came to to try the method I employed the induction current as thus obtained, and with perfect success. From what I have learned since

then, in additional cases of my own and study of those reported by other operators, I place dependence upon results actually obtained in preference to the theories of those who have not done any such work, no matter how eminent these gentlemen may be as gynæcologists or general practitioners.

Secondly. I hold that Faradism is indicated because it acts with greater energy upon the embryo than galvanism. My reasons for thus thinking are these: Galvanic currents are *diffused* more widely (in lateral lines) in passing through tissues, however near the poles may be, than induction currents. Galvanism does not act *mechanically* on the tissues so much as Faradism when the current is uninterrupted. Anelectrotonus and catelectrotonus extend only a short distance from the rheophores under the electro-force developed in operations of the nature considered. The *chemical* or caustic effect is not decided except at the points of contact; hence the European tendency to carry the contact into the sac by needles. Rapidly interrupted or reversed galvanic currents are painful as applied to the female pelvis, whilst the opposite is true of Faradism.

Thirdly. I believe that the death of the embryo is produced by tetanization of its whole mass, and by molecular disintegration consequent upon rapid reversals of polarity, as happens in Faradic high-tension currents. Abundant experiment has taught me that Faradic currents absolutely unbearable in other parts of the body, can be borne not only with impunity, but with little discomfort, as applied to extra-uterine fœtations, viz.: One pole intra-vaginal or intra-rectal, and the other firmly pressed down over either ovary, tube, or upon the uterine fundus in non-pregnant women. I have repeatedly passed a one hundred cell current in this manner for fifteen minutes without any injury to the patients. The maternal tissue involved in the current in ectopic gestation is small in extent, but the *whole* embryo is encompassed if proper manipulation is observed.

To be effective the maximum dose must be given *at once*, it must be *long continued* in that sitting, say for an hour or more. Short doses, though given daily, permit recuperation, the mass may still grow larger and the tube thinner, thus endangering the patient from rupture and hemorrhage. Delay on any account is to be deprecated in these cases.

With successful results in five cases of my own, and with the knowledge obtained through study of reports by others, I feel no hesitation in saying that it is not simply a waste of time to experiment with galvano-puncture, but it is criminally adventuring the woman's life. Death must in the end come to the child or its mother; it really comes to both in a large majority of cases when the condition is unrecognized, when left to nature's efforts, or when not promptly treated.

Prompt treatment means early diagnosis and instant interference. The pregnancy must be arrested with absolute certainty, and two ways only present themselves to my comprehension. One is laparotomy, the other electrolysis. In the hands of a Tait abroad, or Kelly at home, many cases will, thus treated, do well; in the hands of the general practitioner the mortality would, undeniably, be very high. To any man of ordinary common sense, and without special aptness as an electro-therapeutist, electrolysis is no more mysterious or difficult to manage than is vaccination, whilst to the woman it is less dangerous than delivery by forceps. If this be so (and I do not believe that successful contradiction is possible in an honest discussion of the subject), why should a man whose business it is to save life, endanger, nay, fearfully imperil it, by any such procedure as that depicted in the report upon which this paper is based? To the credit of America it is well that the electric treatment of extra-uterine pregnancy has, so far as most reports show, been performed on a sensible basis. Some errors have, of course, crept in through the lack of knowledge of electro-therapeutics possessed by many physicians, but attention is now being paid to the high value of electric force in medicine; and as I have for more than twenty years past used my pen and voice to further its claim to professional notice, I am glad to note the progress thus exhibited. During the period named, I have repeatedly been asked if it was not an error to urge, as I did, currents of high electro-motive force, particularly in genæcological work. I never have had patience with homœopathic doses of anything, and when five to twenty milliamperes was indicated as the extent of current to be given in work of this nature, I wondered how any result could follow such low power in the hands of those narrating the cases. A late genæcologist seemed incredulous when some ten years ago I spoke of employing currents of one hundred milliamperes, and yet I then frequently went to one hundred and seventy-five. Now I do not

hesitate at two hundred and fifty in a case of ectopic gestation, or in accessible fibroids.*

Apostoli has lately awakened the profession to the safety of high force in uterine electrolysis, and perhaps his example may do something to stiffen the weak-kneed brethren abroad in this respect. If anything can turn their thoughts towards the consideration of localized Faradization of high tension in extra-uterine pregnancy it will be a blessing to British womanhood. A long series of experiments during two years past, in the study of electricity as applied to the instant extinction of life, has confirmed my long-held views as to the safety of so-called high power when definitely localized, but the further consideration of this matter is deferred to another time.

*I always employ galvanism to produce absorption *after* the destruction of an embryo by Faradism, or to reduce exudations consequent upon plevic inflammation.

A CASE OF PUERPERAL ECLAMPSIA; RECOVERY.

BY LLEWELLYN ELIOT, M.D., WASHINGTON, D.C.

Mary T., white, aged 18 years, unmarried, of strong physique, was delivered of her first child on the morning of the 12th of August, at ten o'clock, after a labor of eleven hours. The second stage was slow. The case progressed favorably until about four o'clock in the evening of the day of delivery, when convulsions came on. The first was well marked and lasted twenty-five minutes; the second occurred at 4:50, cyanosis very great; the third, at 5:15, lasting twenty minutes, chloroform being administered by inhalation; the fourth, at 5:40, lasting twenty-five minutes; the fifth, at 6:25, lasting twenty minutes. Venesection was now decided upon, chloroform was administered, and twenty ounces of blood taken from the arm. The sixth convulsion occurred at 7:20, lasting fifteen minutes, chloroform inhalation again used, and morphia sulphate gr. ¼ given hypodermatically. The seventh occurred at 10:10 P.M., lasting ten minutes; the eighth, at 12:35, lasting five minutes, followed by great restlessness and intermittent pulse; the ninth, at 1 A. M., (August 13,) lasting three minutes; pulse was then double; at 1:25, morphia sulphate gr. ¼ again given hypodermatically. At 2:20 the patient was still very restless. The tenth occurred at 2:48, and lasted five minutes. I then ordered the following prescription:

℞ Elaterii..... gr. ½
Hydrarg. chlor. mit.....gr. iv
Ft. pulv. no.j
M. Sig.—Give at once and repeat in four hours if necessary.

About the same time the catheter was passed, and ℥ xij of very dark urine were drawn off, which was three-quarters albumin. At 4:30 A.M., a convulsion was aborted by chloroform inhalation; afterwards she was perfectly rational, expressing herself as better, but the powder had not operated. The eleventh convulsion was at 4:48 A. M., lasting five minutes; the twelfth, at 5:05, lasting three minutes; the thirteenth, at 7:20, lasting three minutes, at which time the powder was repeated; the fourteenth, at 8:30, lasting three minutes. At 9:45 the head was shaved and an ice bag applied, to be continued for fifteen minutes at a time. At 9:50 the following was ordered:

℞ Ol. terebinth.
Ol. ricini.....āā ℥j
Tinct. asafetidæ .....℥ij
M. Sig.—Add to one quart of water and use as an enema.

The fifteenth convulsion occurred at 3:10 P. M., lasting two minutes. The bowels were then moved, the urine passed, and the patient became quiet. The sixteenth convulsion was at 6:40 P.M., lasting three minutes; the seventeenth, at 7:40 P. M., at which time the pulse was 134, temp. 102½ F., resp. 54 and irregular; head very hot, while the discharges had stopped. This was the last convulsion the patient had. The next observation was made at 3 P. M., August 14, when the urine yielded but one tenth albumin, and the patient had headache. Morphia sulphate gr. ¼ was repeated. August 15, 1:10 A. M.: She was very wakeful, had no pain, morphia sulphate gr. ¼ hypodermatically; 12:45 P. M., bowels had again moved, the discharges again appeared, but the patient still had much headache. I ordered:

℞ Potass. bromid.....℥iv
Aquæ fontan.....℥ij
M. Sig.—Tablespoonful three times a day.

From this time she improved rapidly until the date of her discharge from treatment, September 20th. Beginning with the third convulsion, chloroform was administered to control each convulsion. To clear away the albumin the following was ordered:

℞ Potass. acetat.....℥iv
Infus. digitalis ad.....f℥vj
Spt. ætheris nit.....f℥vj
M. Sig.—Tablespoonful three times a day.

Puerperal eclampsia occurs during the latter months of pregnancy, or during, or

after parturition, proving at times most formidable. Whether premonitory symptoms, such as dizziness, stupor, headache, irritability, œdema of the subcutaneous cellular tissue have occurred or not, the attacks are sudden and epileptiform in character. The more violent the attacks, the shorter the duration of the intervals. Labor frequently results from the nervous shock and general disturbance. When they appear during labor the pains are increased in force and frequency, since all the muscles partake of the convulsive action. The mortality of eclampsia occurring before and during labor is about one in four; after labor about fourteen per cent. The pathology of eclampsia, after much discussion, is still unsettled, although the urinary origin is generally accepted. The treatment consists in venesection, pressure on the carotids, the administration of strong purgatives, inhalations of chloroform; chloral hydrate and bromide of potash by the mouth, the subcutaneous injection of sulphate of morphia, inhalations of nitrite of amyl, injections of hydrochlorate of pilocarpine. Of these modes the inhalations of chloroform, with the internal administration of chloral hydrate and bromide of potash accompanied by a purgative are the most trustworthy, although sulphate of morphia and hydrochlorate of pilocarpine have afforded me good results. In one case where gr. ⅜ of hydrochlorate of pilocarpine was given hypodermatically and repeated, its action was too depressing; still Braun has given gr. ½ with success. If the pilocarpine were combined with the sulphate of atropia in appropriate doses, its over-action would be prevented. Blood-letting, which at one time was the sheet anchor in the treatment of these cases, was abandoned, to again become a recognized agent. Strong as is the evidence in favor of chloroform, its abuse will, as happened with venesection, tend to bring discredit upon it. It is seldom necessary to produce deep anæsthesia. Chloral hydrate in combination with bromide of potash is more continuous in its action. With the allied assistance of these remedies and careful watchfulness, the rate of mortality will continue to decrease.

510 E street, N. W.

Colorless Tincture Iodine.

Dr. Brown, of Mountain Home, Ark., says colorless iodine may be made instantaneously by adding four drops of carbolic acid to the ounce U. S. Disp. formula of equal parts of iodine and aqua ammonia.—*South. Dental. Jour.*, July, 1887.

Society Reports.

MEETING OF THE OBSTETRICAL SECTION OF THE BRITISH MEDICAL ASSOCIATION AT DUBLIN.

Special Report to the Med. and Surg. Reporter by E. S. McKee, M. D.

Discussion of Puerperal Fever.

Introduced by W. S. Playfair, M. D., F. R. S. P., LL.D., Professor of Obstetric Medicine at King's College Hospital.

The subject which I have the honor to introduce to you for discussion cannot fail, I think, to interest all upon whom the responsibility falls of attending women in labor. The prevention of the scourge of midwifery practice, septicæmia, is one of the most important duties. In the short space of a quarter of an hour allotted me, it will be impossible to do more than lay down a few general rules which should guide us. In lying-in hospitals since the revolution of antiseptics, a marvelous change has been effected. I am more particular to-day to insist on the prevention of puerperal disease *in private and domiciliary practice*. In the well conducted lying-in hospital of to-day, a woman is actually as safe, if not safer, than if confined at home in a large house and surrounded by all the comforts money can procure. The great Rotunda Hospital of this city, as well as the lying-in institutions of London, Paris, and St. Petersburgh as well as other continental cities, prove what I have said. There is nothing in the history of medicine more remarkable than the change in these institutions since the adoption of the life-saving principles of Lister. I doubt if such a thing can be found now as a hospital for lying-in in which antiseptic rules have not been introduced, and in which similar good results have not followed it. Though recognized and practiced in public practice, I doubt if even yet antiseptic midwifery is at all general in private practice. Called to see septic cases as a consultant, I very seldom find that the practitioner in attendance has followed out the rules in so general use in lying-in hospitals. Perhaps when the younger class of practitioners get more into the practice it will be different, but with the bulk of men now in practice no special care is taken. In civil practice similar care and precautions to those adopted in institutions—a matter of

no very serious difficulty—should almost wipe this scourge out of existence. Fritsch daily dressed a putrid wound in the person of his brother for a whole year, and at the same time daily performed two or three obstetric operations, and by a vigorous antisepsis has not had a single case of septicæmia during the whole time. To show how simply this may be done, and to elicit your views on this subject, is my object to-day. I have no time for argument, and must perforce be brief and content myself with dogmatic statements. To prevent puerperal fever we must have an intelligent idea of what it is, how it originates, and how it may be conveyed to the patient. Unless we are agreed on these points we are not likely to come to any conclusion of value. I take it to be now almost universally admitted that puerperal septicæmia is practically the same thing as surgical septicæmia. A disease caused by poison absorbed through the genital tract into the system, which poison may originate de novo or be conveyed to the patient from without by septic matter being brought in contact with her. We should manage her so as to reduce the chance of absorption to a minimum by closing as much as possible the channels through which septic matter is to be absorbed by thorough and permanent contraction of the uterus, and by lessened absorptive surfaces, offered by perineal lacerations and the like. How customary it is to find the binder hurriedly applied, with the uterus imperfectly contracted, remaining large and flabby underneath it, distended with clots which frequently breed mischief. I practice and teach never to remove the hand from the uterus for at least twenty minutes after the removal of the placenta, keeping up a continuous, though not rough, rubbing or kneading. I believe it also good practice at this time to administer a large dose of ergot, and, if contractions do not set in, to give a hypodermic injection of ergotine or ergotinine. Personally, I have never seen any harm result from the routine administration of ergot.

As to perineal lacerations, I think the rule should be absolute that the perineum should be inspected after labor, and that every tear more than a slight laceration of the fourchette, should be closed with cat-gut or wire suture, first cleansing thoroughly with the bichloride of mercury solution, and subsequently dusting with iodoform night and morning. Thus any chance of absorption through the bared perineal surface is avoided, and complete healing is insured.

Most important, however, are the *antiseptic precautions* by which we are to prevent the poison being introduced from without. This, indeed, is the essence of the whole matter. The vast majority of cases of puerperal septicæmia, to my mind, arise directly from poison carried to the patient from some preventable accident. This is an unpleasant fact, but we must look unpleasant facts in the face. The nature of the medical man's work brings him constantly into contact with septic matter. There is no avoiding this. What we have to do is to take the precautions happily at our disposal to avoid the risk or reduce it to a minimum. The obstetrician, if he has much gynæcological practice, is especially in danger of infecting his patient. He has, in constant vaginal examinations, to imbue his fingers with vaginal discharges, which may be of the utmost possible virulence, such as of uterine carcinoma. Many have infected themselves in this way through punctured wounds of the finger, and why not infect others?

If I dwell on unpleasant topics such as these, my only object is to secure a thorough appreciation of their danger and its avoidance. The nurse has often, and justly, too, the blame to bear. She is constantly handling the genital organs at all hours for many days. Many of the older class of nurses persistently set themselves against the antiseptic precautions, as "new fangled fads which they don't hold with." If they are positively ordered to carry them out, they are apt to do so in the most perfunctory way. The tips of the fingers are just dipped into the antiseptic lotion. A sponge is used to wipe the genitals and is put away unwashed, or most imperfectly washed, on a hot summer day. Quite recently I had occasion to use a catheter, and the nurse produced one belonging to her. I fished out of the eye a decomposing blood-clot, which had been lying there for days or weeks. Again, not long since, I saw a most intense case of septicæmia; the nurse answered me that she had been most careful, and yet I found an under sheet, unchanged for four days, saturated with lochia, on which the patient was lying. In a hundred unsuspected ways such as these, death may be conveyed to the patient. If, however, efficient antisepsis is to be carried out, the rules must be such as the nurse can understand, and not too complicated and troublesome to put into execution.

The following is a copy of the card given every nurse in attendance on cases under my charge:

Antiseptic Rules for Monthly Nurses.

1. Two bottles are supplied to each patient. One contains a solution of bichloride of mercury, of the strength of one part to one thousand of water, tinted with litmus (called the 1-1000 solution), the other carbolized oil (1-8.)

2. A small basin containing the 1-1000 solution must always stand by the bedside of the patient, and the nurse must thoroughly rinse her hands in it every time she touches the patient in the neighborhood of the genital organs, for washing or any other purpose, before or during labor, or for a week after delivery.

3. All sponges, vaginal and rectal pipes, catheters, etc., must be dipped in the 1-1000 solution before being used. The surface of slippers, bed-pans, etc., should also be sponged with it.

4. Vaginal pipes, enema-tubes, catheters, etc., should be smeared with the carbolized oil before use.

5. Unless express directions are given to the contrary, the vagina should be sponged twice daily after delivery with warm water, with a sufficient quantity of Condy's fluid dropped into it to give a pale pink color.

6. All soiled linen, diapers, etc., should be immediately removed from the bedroom.

N. B.—These rules are for the protection of the patient from the risk arising from accidental contamination of the hands and sponges. It is therefore hoped they will be faithfully and minutely adhered to.

There is nothing complex in these rules. The details may be varied considerably as to the form of antiseptic employed. It is the principle of antiseptics more than the details which is important. I prefer the bichloride of mercury to any other antiseptic, not only because of its acknowledged potency, but because it is bland and unirritating to the skin, and capable of being carried in a concentrated form, and the solution made at a moment's notice. Nurses will not use a carbolic lotion or will use it inefficiently, because of the tendency to injure the hands, while I have never known one to object to the mercurial solution. I do not recommend it for vaginal injections after labor, because of a few cases of mercurial poisoning that have been reported to follow its use in this way.

There are a few precautions to be used during the labor by the physician himself:

1. Before making any examination or using the antiseptic lotion, he should thoroughly cleanse his hands with soap and water, being specially careful about his nails, under which septic matter may easily lurk.

2. At an early stage of the labor the vagina should be thoroughly syringed once with the antiseptic lotion, and the vulva sponged with it.

3. When the head is distending the perineum the external genitals should again be sponged with the solution.

4. Cold cream, lard, etc., should not be used for lubricating the fingers, but carbolized oil or vaseline employed instead.

5. When possible, sanitary towels should be used to receive the lochial discharges, in preference to diapers, as they may be burned when soiled. All risk from imperfectly cleansed diapers is thus avoided. I do not think these suggestions impose a grievous burden upon the practitioner who has the welfare of his patient at heart.

There are many other points on which I might dwell if time allowed. One which seems particularly important, is the duty of satisfying ourselves of the sanitary condition of the house in which our patient is to be. It is but seldom, however, that our opinion is asked on this point. Unfortunately the public believes it is the duty of the profession to cure disease when it arises, not to prevent it. Meddling with such matters beforehand would be too often considered an unjustifiable interference. I am fully convinced that if a careful sanitary inspection were instituted before parturition, a great step would be taken towards attaining the object of this paper, "The Prevention of Puerperal Fever."

The subject was farther discussed by DR. ROBERT BARNES, of London, who read a paper on this subject:

The Causes, Internal and External, of Puerperal Fever.

A clear understanding of the nature and causes of puerperal fever is the rational antecedent of a rational system of prevention. What is puerperal fever? What are its factors and constituents?

There is not one cause but a plexus of causes. Failure to comprehend this truth is especially conspicuous in the German works. By a short and arbitrary process of synthesis this school has formulated the dogma that puerperal fever is puerperal septicæmia, the result of septic infection from the genital canal, thus overlooking important constituent factors. Starting from the state of gestation we find it specially marked by exalted nervous and vascular

tension. An acute process of building up is going on.

Parturition puts to the supreme test every tissue, every function. We have the combined sources of altered blood: 1. That derived from gestation; 2. That arising during labor; 3. That arising from the disintegration of the superfluous tissues, built up during gestation. Labor completed, a process is started the very reverse of that which prevails in the gravida. The high vascular tension subsides, the tide turns, the blood is invaded by waste stuff which has to be cast out of the body. This is done mainly by the excreting glands, liver, kidney, skin, intestines, lungs—all of which are called upon for active work. They must discharge the waste stuff as fast as it is received into the circulation. If this waste stuff be not duly excreted it accumulates and acts as a fever-causing poison. Cases of thrombosis and phlegmasia dolens are mainly the expression of the loss of balance of disintegration and elimination.

This is the simplest, the fundamental form of puerperal fever, but it is the compound of three forms of altered blood: 1, the blood of the gravida; 2, the blood of the parturient; 3, the blood of the puerpera. This is purely auto-genetic. I call it endo-sepsis, because the conditions arise entirely within the patient's system.

Another group of symptoms which disturb the orderly course of the puerpera are influences which *retard the secretions and excretions*, as chills, malarious conditions, errors of diet (among which insufficient diet is one) and bad hygienic surroundings and emotions.

Meteorology controls these secretions largely, and I believe has no little effect on the frequence of puerperal fever. I show here a number of charts, the first of which shows, according to the Royal Meteorological Transactions, the general temperature and rain fall for 30 years—1844 to 1874. No. 2, shows the deaths from scarlatina, fevers, erysipelas and puerperal fevers for the same period. No. 3, shows the total births and deaths for the same period. The second series I have constructed on the same plan. It consists of the history for 10 years, 1875-1884, the months and weeks of each year being cast together. In the second series we get the curves for the following 10 years. The separation of 10 years can be compared with the preceding 30 years. The general similarity of the curves is remarkable; it affords strong evidence of the universal prevalence of the causes.

The tables exhibited show the relation of the seasons and atmospheric conditions to fevers, puerperal and others, and illustrate a law which has been widely recognized, namely, that zymotics are most fatal in the winter. This, I believe is true; the damp from the cellars, charged it may be with foul water, but noxious in any case, is sure to be sucked up into the house and seeks by preference the warmest spot. This is the lying-in room, the heat acting as a relative vacuum in the highly heated and poorly ventilated room. This source of danger is distinct from the ordinary drains or sewerage of the house; either may act alone, or they may act together, intensifying the danger.

This damp foul air drawn into the lying-in room may be contaminated with specific poisons, as of typhoid, scarlatina or of erysipelas; but the contamination is not necessary to work mischief in the puerpera. This evil, that the lying-in room is chiefly supplied by air from the lower regions in winter, need hardly be felt in summer, as fresh air is brought directly from the outside. Pressure then works against the up-current, pure air is gained, foul air is repelled. Here the author showed a model house—to prevent this suction of foul air. During the past winter, an unusually inclement one, I have been called to attend an unusual number of cases of child-bed fever. I rarely failed to find sufficient cause for the trouble in the sanitation. I would enforce emphatically the old rule to move the patient to another room, preferably the drawing-room, which is generally the healthiest, most airy in the house. Sewer gas, if not carrying zymotic germs, may cause fever. The poison, however, will be kept up. Hence, the advantage gained from moving the patient away from the influences of her surrounding.

As to *decomposing matter in the genital tract*, we should first close the gates against the entry of the enemy by securing firm contraction of the uterus, and prevent the suction action of the abdomen. The next step is to give ecbolics, as quinia, cinnamon, nux vomica, ergot and digitalis. Some combination of these medicines should be given in every labor. We should then eject the enemy, and prevent the gathering force by washing out the uterus. Uterine irrigation is especially useful in the auto-genetic forms, in which noxious matter is taken up from the genital tract. It is not frequently necessary in the hetero-genetic or zymotic forms.

The women of the laboring classes go through child-bearing more safely than their pampered and delicate sisters. It is because they are not subjected to and enfeebled by excessive cultivation of the emotional and intellectual elements. The daughter of luxury never knows a day's labor till she is taken in labor. While the woman of the working classes labors every day.

Lactation is evidence of glandular capacity. Failure to produce milk is presumptive evidence of glandular incapacity. Fever prevents or diminishes secretion; in some cases at least.

Fever declares itself because the glands cannot do their duty.

From what has been said, it follows that to ensure the fullest security to the puerperal woman, to put her in the best position to go through the transition from the puerperal to the ordinary state, we must do what we can to keep every organ including the glandular system in good working order; and to guard against all known agencies which may disturb the healthy action of the organs.

The relations of Meteorology to Puerperal Fever is a point to which I wish to call especial attention. We see by the tables that puerperal fever like other fevers prevails most fatally in winter. To what extent can we control the pernicious influences of winter weather? Domestic meterology is greatly under our control. We must inquire what are the external conditions which favor excretion. The excretory force of the lungs is increased in value in the puerpera. Under ordinary conditions in the non-pregnant they give off watery vapor, carbonic acid, sometimes ammonia and a minute quantity of organic matter. It is certain that the capacity of the lungs increases after labor, so it is probable the quantity of carbonic acid exhaled is increased, and it is certain that the exhalations of organic matter increase. The "gravis odor puerperii" is partly due to this increase. In some cases, those verging closely on endosepsis, the lochial discharge is absorbed. In these I have noted a sallow aspect and a degree of febridity, and I have taken this as an indication for irrigating the cavity of the uterus.

To get rid of the excess of aqueous vapors of carbonic acid, and organic excreta by the lungs and skin, a constant supply of pure air is required. It must be dry and comparatively rare. There are two principal modes by which gaseous matter including germs of bacteria, are carried: first, by diffusions; second, by currents of air. Active diffusions are especially valuable so long as they bring nothing noxious to the patient; but if foul matter comes with the air it will tell against the case; hence the great importance of a supply of pure air, and the removal of all impediment to free circulation. I am disposed to believe the most injurious of all meteorological conditions is damp, in the forms of saturated air, fog, and mist. Wind, rain, and sun are the great purifiers of the atmosphere; movement of the air promotes diffusion, sunshine works chemical changes, and the rain scours or washes away impurities. All this of course is familiar knowledge, but it is not superfluous to ask, if it is fairly applied to the regulation of the sick room? Let us consider how far we may bring the meteorology of the bed-room to the conditions of healthy external meteorology; first, let the lying-in chamber face the south; second, to combat external damp, a fire is best in an open fire-place, the open grate serving as a ventilator to carry off impurities. Among the abominations of self-styled sanitary engineers, I feel called upon to denounce heating by hot water pipes. They are too often effective means for the culture and diffusion of noxious germs. It is possible also to wash the air admitted by a Dobin's tube, by a shower of water falling into the tubes.

The modification of the air by chemical agents, with the mechanical addition of vapors and gases possessing medical virtues, has many recommendations.

In the early morning hours between 2 and 4 o'clock is the time when the wind is the lowest and the meterological conditions the worst. At this time the ventilation of the room should be attended to with greater care than usual.

All precautions resolve themselves into one word, cleanliness. All antiseptic precautions are but a part of the general scheme.

The meteorological conditions are of primary importance though I am far from underestimating other causes.

Whilst protecting the citadel from the foe without we should take care that mutiny does not break out within.

JOHN W. BYERS, A. M., M. D., Belfast, continued the subject by reading a paper on the

Prevention of Puerperal Fever in Private Practice.

After giving some statistics showing the great mortality of puerperal fever, the writer said it was impossible to take measures for its prevention until we had clear ideas as to its causation. He discussed the various views and gave his reasons for believing it

to be blood poisoning analogous to septicæmia met with in surgical practice. Taking this view, he believed there were three sources by which the poison might be introduced into the system of a lying-in woman:

1st. Sewer gas, as in unhealthy homes.

2nd. The nurse.

3rd. The accoucheur.

Under the first head he recommended the inspection of a house before the confinement took place to see if it was in a proper sanitary condition. He gave rules for the guidance of the practitioner and nurse. He advised the strictest cleanliness, thorough washing of the hands in an antiseptic solution (1-1000) bichloride of mercury, few examinations, a proper and careful management of the third stage, the keeping of the patient on her back for a time after confinement, and antiseptic douches.

He drew attention to the cases in which a decomposing blood clot or placenta might be the source of the disease, but believed that even in these cases the decomposing mass in the uterus only acted as a nidus in which the poison from without found a suitable soil.

He discussed the question of how a physician should act with reference to obstetric practice, if he came across cases of scarlatina or foul surgical wounds, and said he believed by baths, changing the clothes, and strict antiseptic washings, he need have no fear in attending a patient during confinement. He said if those who attended women in labor would act as if each one were likely to develop septicæmia, they would take thorough antiseptic precautions and thus such cases would be reduced to a minimum.

The whole essence of the prevention of puerperal fever was:

1. To prevent the poison entering the system.

2. To destroy the poison if it got into the genital tract of a patient, before it entered her tissues and blood.

A paper by Dr. Grigg of Queen Charlotte's Lying in Hospital, London, on this general subject, was read by title.

Dr. Robert Barnes, of London, said that we all agree in what Dr. Playfair has said, and it is of extreme value to us to have it put so well. It will be well for us to follow out antisepsis; but antisepsis is not the whole prevention of puerperal fever. I do not think with Dr. Playfair that it is the same as surgical fever; but that it may be caused by cold, chill, exposure, fever, meteorological conditions or accidental causes. This fever is far more common in winter than in summer. There is something before septicæmia. There is a puerperal constitution which makes the poison doubly dangerous. I hope Dr. Playfair will go a little farther back and look a little at the patient.

Dr. George H. Kidd, of Dublin, considered further the question of the nature of septicæmia. Dr. Burdon Sanderson has said there was a time when we were obliged to fight with all our might to make people believe there was such a thing as septicæmia. This is not the trouble now. The danger is that we put too much stress on antisepsis. He believes that attention to the patient previous to labor has much to do towards preventing the septicæmia. Dr. Collins, when master of the Rotunda Hospital, delivered eleven thousand women in that institution in four years and had not one case of septicæmic fever. We must not overlook the natural history of the disease, the fact that it comes in epidemic waves.

Dr. Lombe Atthill, of Dublin, said he was a firm believer in septicæmia. The term puerperal fever he abhorred. It is caused by septicæmia. I was the first master in the Rotunda Hospital to require antiseptic precaution which was then very imperfect. I had to undergo great opposition. Especially was this so with the nurses. It was indeed an effort to get them to part with their old black dirty dresses and put on the uniform. They thought that to be compelled to wear such dresses as they were in winter was nonsense. I consider a relaxed condition of the uterus to be a common cause of septicæmia. I well remember one patient who came into the Rotunda in labor. No physician was present at the time, but the nurse saw there was something the matter with the patient and put her in a private ward separate from the other patients. I was soon called and found the patient to be suffering with erysipelas. She could not be put out of the house in labor, but after delivery she was sent to another place, only remaining in the hospital fifteen hours. There had been no case of puerperal fever for months before, yet there was one before twenty-one hours, and this was followed by several others, then the disease gradually disappeared. I think, however, these cases were due to atmospheric conditions, and not to the presence of the woman in the hospital. I think contamination in that case possible under the conditions. I hardly believe that the preliminary treatment of puerperal fever will prevent puerperal fever in many cases. I do not belive ergot given in a single dose will produce any effect. It should be given frequently.

Dr. M. T. Malony, Arklow, Ireland, said that in his city of six thousand inhabitants there had been an epidemic of scarlet fever for six months. During this time there was no case of puerperal fever and no approach to one. The scarlet fever was of a mild type, yet some cases were quite malignant. We had many cases of sore throat, some of them malignant, and some tonsillitis, &c. The town is the most unsanitary place on earth. As medical officer, I attended the most of the cases of labor. I used no antiseptics, except on my forceps.

Dr. C. H. F. Routh, of London, thought that women in an unhappy state of mind, such, for instance as had been seduced, as has been shown by Dr. Barnes, were much more likely to suffer from puerperal fever.

Dr. John W. Byers, of Belfast, was a thorough believer in the septicæmic view of puerperal fever. How can the gentleman, maintaing the views of other causes of puerperal fever, explain the results of antisepsis in hospitals? Our nurses should be firm believers in antisepsis. Opinion is now, I think, going in the direction that the number of cases which are autogenetic are diminishing. The doctor then quoted from a paper by Dr. E. G. Zinke, of Cincinnati, read before the American Medical Association in 1887, in which the question of "How soon after exposure to infection can you attend a woman in labor?" was discussed, and the opinions of prominent authorities quoted. These opinions were at great variance. It was a question he would wish answered.

Dr. Samuel Sloan, of Glasgow, said that antiseptics in the hospital in Glasgow had reduced the mortality much. They could not do without antiseptics. We should look more to antiseptic measures than we do. He thought close rooms in winter were more productive of puerperal fever than chill.

Dr. Moormcy, of Edinburgh, thought the the plan to stamp out puerperal septicæmia was Eutopian. How can we stamp out atmospheric conditions, lochial discharges, etc.? The patient should be prepared before-hand. She should be given the chloride of iron, quinine, potash, etc. Ergot in small doses before labor is innocuous and acts beneficially. The prevention of puerperal septicæmia is the function of the nurse, more than of the doctor. It is not at all above the dignity of the obstetrician to look after the nurse. He closed by recommending uterine injections.

Mr. Lawson Tait, with Lombe Atthill, *abhorred the name of puerperal fever.* The practitioners in his neighborhood had been giving him the opportunity to open the abdomen in cases of puerperal septicæmia, which had been followed by good results. There are two kinds: one disease is systemic, and medicine and surgery are powerless; the other is local, and the patient can be saved. He had recently been called into the coroner's court to testify in a case where sixteen patients were taken with puerperal fever in the practice of one man, all of whom died. He inquired, and found that the most elaborate antiseptic preparations had been made and carried out. He did not inquire too closely, fearing to find out too much; but after the trial, remembering that all the cases of puerperal septicæmia had been forceps cases, he asked him what precautions he had taken with his forceps. He replied, none. There was the whole secret.

Dr. H. Cameron, of Glasgow, had seen five cases of puerperal septicæmia in one man's practice. He found that he had not been in the habit of disinfecting his forceps. He advised him to disinfect his forceps and burn his leather bag.

Dr. W. H. Humiston, Cleveland, Ohio, said: If, as one gentleman has stated, puerperal fever is an epidemic disease, and occurs in waves without any assignable cause, why does it not now occur in the lying-in hospitals at Dresden, Prague, and Vienna? In these very same institutions, prior to the adoption of strict antiseptic precautions, the mortality from puerperal septicæmia was appalling, ranging from 10 to 18 per 100. It has been my privilege to visit these institutions, and study and observe their methods of conducting obstetrical cases. They are most careful, and insist on the highest degree of cleanliness obtainable, by frequent washing of hands and instruments with soap and water and antiseptic solutions. When Prof. Leopold took charge of the Dresden Lying-in Hospital, the mortality was 18 per cent.; by strict antiseptic precautions it was brought down to *nil*, and has so remained for several years, not a case occurring within its walls.

One gentleman has asked how soon, after coming in contact with septic material, is a physician justified in attending a case of obstetrics? I answer, at once, allowing time for change of clothes and thorough washing with trustworthy antiseptic solutions.

In Carl Brown's wards in the lying-in department of the general hospital at Vienna, the assistant has charge of the wards, and takes personal charge of all complicated

cases. At the same time he is daily giving operative courses upon the cadaver to students and practitioners, and I have seen him summoned from the operating table in the pathological building to make a forceps delivery. He would remove his protective coat and go through the most careful washings of the arms and hands. I never saw septic trouble arise in cases so managed. One important point which is original, and I hope will be found trustworthy by you in your future practice, is the indication that the specific gravity of the urine gives in foreshadowing coming trouble. If before and soon after delivery the specific gravity of the urine is markedly below 1020, look out for breakers ahead; for, with the great amount of effete matter to be carried out of the system, the urine, if the elimination be sufficient, will be of high specifie gravity.

Dr. R. Y. Dill, of Belfast, advised the washing of the hands under a tap instead of scrubbing dirt into them with a brush. Mind your nails. Always give two or three doses of ergot during the last two or three severe pains of labor. The mechanical arrangement of the beds should be such that the foot can be elevated in case of flooding, and the head elevated to assist drainage of clots.

Dr. Corley, of Cork, favored the semi-erect position, but did not favor the immediate suture of the perineum.

Dr. Wallace, of Birmingham, favored antiseptics, but favored still more absolute cleanliness. He dips his forceps into boiling water, and nothing further is necessary. He cleans out the uterus in the early part of the disease, and swabs it out with the tincture of iodine. As to abdominal section, when you have absolute purulent septicæmia, nothing helps. When local septicæmia, help can be obtained.

Dr. Shaw had practiced in London for 13 years, and had 1900 cases of labor. He never washed out a vagina, disinfected his forceps, nor lost a case from puerperal septicæmia.

Dr. A. V. Macan, of Dublin, said that we are all agreed that sepsis is a great danger after delivery. What is the relative danger of sepsis and other causes? If antisepsis reduce the cases so enormously, the great majority must be caused by sepsis. The remainder we will present to those who think there are other causes. It is a small present. Even in the heterogenetic, sepsis must be introduced. I must say that allowing a nurse to go out to follow her calling after a three week's training, as is the case in London, is a disgrace to civilization. Here in the Rotunda we think six months little enough.

Dr. Playfair, in closing the discussion, said: The words puerperal fever were not used in the paper, yet that term was heard again and again in the discussion. Cold and chill may produce a puerperal disease, but not puerperal septicæmia. No one is more fully possessed than I with the idea of preparing a patient against puerperal septicæmia. As I said, my allotted time was far too brief to allow me to go over the whole ground. I must omit something. I think there never was an epidemic of puerperal septicæmia. It does not come in that way. It is totally different from cholera and that class of diseases. This is a most dangerous theory. Puerperal septicæmia may be introduced through the atmosphere. The statement of Dr. Humiston is one of the most remarkable statements I ever heard.

Dr. M. Q. McCallahan, of Brailsford, read a paper on "A Month's Abdominal Sections," by Mr. Lawson Tait. This consisted of a brief report of 35 abdominal sections, of course all recovering, some of them almost snatched from the other world. Several were performed for septicæmia.

Mr. Tait who was present, said that the reports just read would show how he selected his cases. This cry about the selection of cases is an absolute falsehood. I care not who says it. One case reported here was one I would certainly have been excused from operating on. The woman was brought in in a state of collapse, almost dead. I had done 300 laparotomies with but a few deaths and I did not care, I assure you, to add another. I confess it was a temptation to refuse but I thought I must give the woman a chance for her life, slight as it may be. The result was wonderful. Suppose some one of our "tramp visitors" had come along and seen this case; he would have gone away saying, Lawson Tait is the most reckless operator I ever saw.

Dr. Robert Barnes, of London, expressed unqualified admiration of Mr. Tait and his results. He thought the surgery of the abdomen and of the brain were epochs in surgery. He was glad to know that they were British productions and that we were not indebted for them to the Germans.

Dr. W. H. Humiston, of Cleveland, O., said that he was one of these "tramp visitors" who was excluded by Mr. Tait. He had heard Mr. Tait abused and called a liar in Germany, but it was done by those "tramp visitors," scamps and scalawags, who went once or twice and then went away to criticize.

If you want to study a man's methods go and stay long enough to know them.

Mr. Tait: the "tramp" does mischief in more ways than one and I'll have nothing more to do with him. He is doing mischief on the other side of the Atlantic. There are two kinds of doctors in America as well as in England. Some know something, others do not. I have had doctors come from America, bring their wives and families and stay six months. I taught them all I could. Others came once or twice, went away, and knew more than those who had tarried six months.

No case of puerperal peritonitis ought to be left to die without the abdomen being opened, and I believe the day will come when we will make a large number of operations in the median line for hernia.

Several other speeches laudatory of Mr. Tait and his methods were made.

Editorial Department.

Periscope.

The Lime Treatment of Local Tuberculosis.

Senger (*Deutsche med. Wochenschrift*, No. 31), has made a critical study of the method of treating tubercular joint affections practiced by Kolischer. After speaking of the uncertain and often unfortunate results following the ordinary treatment of such cases, and the skepticism which one naturally bears toward new therapeutic attempts, he says that the statements of Kolischer and the endorsement of Prof. Albert seem to leave no doubt as to the great value of this method. Prof. Albert said that few facts made such an impression on him as the cases treated by Kolischer. As the result of careful observation he had to admit that the method furnished a noteworthy therapeutic effect and could be warmly recommended for further trials. The results were surprising, not only on account of the rapid healing, but also on account of the complete and free motion in the diseased joints.

Kolischer proceeded on the assumption that it might be possible for the fungus joint affection to undergo a calcification similar to that occurring in tubercles of the lung. In connection with Dr. Freund (assistant in the physiological laboratory) he made experiments with acid calcium phosphate, and found that its effect was much increased when the solution contained an excess of free phosphoric acid. Kolischer distinguishes two kinds of fungus inflammations: First, those not yet gone on to the formation of fistulæ; second, those already fistulous. In the treatment of the first kind, Kolischer proceeds as follows: A sublimate dressing is applied for twenty-four hours. The part is then washed with soap and water and irrigated with a one per cent. sublimate solution. Then the solution described below is injected. The hypodermic syringe is of hard rubber, with a platinized needle (steel being acted on by the solution). The syringe is kept in five per cent. solution of carbolic acid. Injections must be made in different parts of the tumor, part of the contents of the syringe being expelled each time. The "fungus" must be entirely permeated by the solution, and give a peculiar juicy feeling, while the parts not injected are depressed and elastic.

The needle must be inserted as far as possible, even into the softened bone. The injections are very painful, and after a few hours severe pain ensues, for which morphia hypodermically is recommended. An antiseptic dressing is applied. High temperature, lasting 17–24 hours, follows, and the inflammatory reaction lasts 5–6 days. After this time the joint is put in a starch dressing, which is renewed as often as it becomes loose. After from three to six weeks more the swelling has disappeared, there is a limy hardness perceptible, but no pain. Massage and passive motion are begun. Malpositions can be corrected by the dressing in the latter days of the reaction.

The second class of cases is treated by widening the opening, tamponing the cavity with gauze soaked in the solution (No. 2), and covering all with a sublimate dressing. The tampon is renewed every two days. As soon as healthy granulations appear iodoform and arg. nit. can be used. Caries of the bone is treated in a similar way.

Cold abscesses are opened freely and packed without being scraped out. Tubercular fistulæ in ano are treated similarly. Attempts to treat enlarged glands were too few to be considered as to their result.

Kolischer has treated more than 200 such cases, with striking results. Three cases were demonstrated to the Vienna Medical Society, with casts showing the affected parts before treatment. Two of these were

cured tuberculosis of the elbow joint. Another was a boy of four years, who six weeks before was admitted to the clinic with the right knee anchylosed in an angular position, with intense pain on motion, etc. Finally a case of tuberculosis of the wrist joint was shown. A week before this had been swollen, with lateral movability in the joint and metacarpal bones. At the demonstration the hand had almost normal contours, the parts formerly swollen were hard and bony, there was no pain, and active motion of the fingers was possible.

Freund originated the following formulæ after a study of the blood of tubercular subjects, though the manner of the investigation is not given:

1. ℞ Calc. phosph. neutr.....gr. lxxv
Aq. destill.....ʒj ʒ ivss
Then add: Acid. phosph. q. s. to make a perfect solution. Filter and add
Acid. phosph. dil.....♏ ix
Aq. dest. q. s. ad.....fʒ iij ʒj
S.—For injection.

2. ℞ Calc. phosph. neutr.....fʒ iss
Aq. destill.....O j
Then add: Acid. phosph. q. s. to make a perfect solution; filter and add
Acid. phosph. dilut.....fʒ ii–iv
Aq. destill. q. s. ad.....O j
S.—For impregnating gauze.

The fluid for injecting is sterilized, which causes a precipitate. This, however, is re-dissolved on cooling. For the gauze-solution 1 per cent. of free phosphoric acid suffices in mild cases, 2 per cent. for very chronic cases. The dissolved acid calcium phosphate solution amounts to 6.5 per cent.

Senger says that on account of the great importance of the subject he has given it so much space, and especially in consequence of Albert's favorable criticism. From the result of the lime water treatment of phthisis pulmonalis he confesses disbelief in the probability of great success, but admits that in local tuberculosis the conditions are not exactly parallel, and the method of Kolischer need not be discarded for a priori reasons. His doubt has been much increased by the latest communication of Kolischer, in which, from a study of 500 cases, the latter admits that in severe tubercles of bones, necrosis, tubercular ulcers and glands, the lime method is of little value. But in children, especially in regard to the restoration of function, the results are brilliant and imposing. Even in severe bone diseases a certain cure is attained, though in rare cases even in children the results are negative. In older persons the results are still more unfavorable. Extensive necrosis Kolischer recommends to be treated by chiselling and then tamponing with the lime gauze. This very fact is suggestive, inasmuch as it is abandoning the idea of cure by medication. Even if the numerous fungous arthritides could be cured by Kolischer's method the therapeutic advance would be great. Unfortunately this is doubtful, because he himself admits the difficulty of curing bone tuberculosis, and the most arthritides depend on or originate from primary foci in the bones. It would be encouraging if this doubt were caused by an imperfect separation of bone and joint diseases on the part of Kolischer, and not by an imperfection in the method.

It is very desirable that the lime treatment should be studied by other investigators.

Spontaneous Expulsion of a Foreign Body after staying in the Eye for Five Months. Perfect Sight Restored.

L. Debierre gives the following account of this most interesting case:

On November 5, 1886, a child eight and a half years old was taken by his father to the clinic of M. Meyer for an injury of the left eye, which had occurred two days before. It seems, from the father's account, that the child was striking fulminating caps with a hammer, when one exploded and wounded the left eye, causing at the same time a jet of blood to spurt some distance. The child was hurriedly taken home and a doctor immediately summoned. The latter applied compresses to the eye and then a protecting bandage.

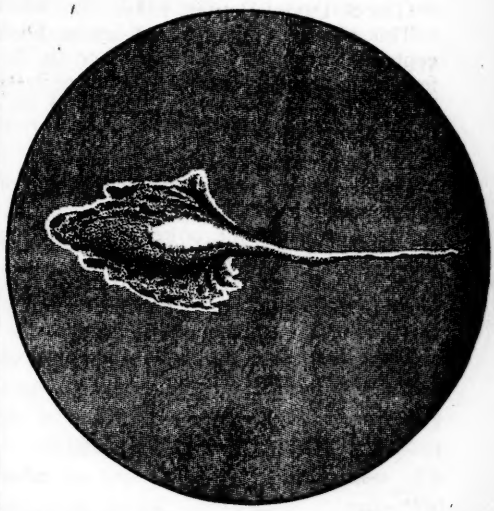
At the first examination at the clinic (two day's after the accident) there was marked œdema of both left eyelids. The skin was intact, the wounding body having struck the ball of the eye directly at its supero-external part, eight to ten millimetres behind the sclero-corneal margin. At this level there was a very pronounced chemosis, divided into two by a contraction of conjunctival tissue indicating the point of entrance of the vulnerating body. A little pericorneal injection in the internal part of the corneal border; anterior chamber intact; pupil with maximum dilatation; crystalline lens seemingly transparent; vision $\frac{1}{10}$ of normal. The field of vision taken at the perimeter showed a very marked limitation at the inferior part which almost amounted to complete failure. Ophthalmoscopic examination proved the presence of a large effusion of blood occupying the superior portion of the retina and extending nearly to the superior border of the optic disc. At this level the retina seemed lift-up and even loosened from its attachments.

An endeavor was made under chloroform to find and remove the body, but without

success. The child was kept under observation in bed for five days, and as there were no bad effects from the exploration, another ophthalmoscopic examination was made; at which time the hemorrhage which had occupied the superior part of the fundus of the eye had to a great extent been absorbed, and one could see below and beyond the disc a large ecchymotic spot at the inferior part of which the presence was established of a black body which Meyer supposed to be the foreign body. The retina was lifted up throughout the superno-external region. The rest of the eye was sound, the vitreous and chrystalline lens perfectly clear, and vision had increased to ⅓ normal. In this condition, the child suffering no pain, he was directed to return home; the father, however, was admonished that at the least painful accident arising in one of the eyes he should at once bring the boy back.

The patient was then lost to sight until March 16th, 1887, when he returned because of pain and of a sensation of a foreign body in the upper part of the injured eye. On lifting the upper lid, the point of entrance of the foreign body was seen as a circumscribed swelling about one centimeter in diameter. In the middle of this reddened swelling was a more depressed point, which seemed open, and, on touching it with a metallic sound, there was a certain resistance. The rest of the eye presented no alteration; vision normal, with the exception of slight hypermetropic astigmatism. Field of vision normal, except below and within, where there was limitation, which for colors went nearly to the point of fixation.

The pupil was dilated to the maximum, and at the ophthalmoscopic examination there was recognized in the supero-external part, at a distance of a papillary diameter and a half from the entrance of the optic nerve, an alteration of the fundus of the eye having a horizontal diameter of twice that of the disc, and a vertical diameter of one and a half times that of the optic disc, of irregular form, grayish color, and bordered irregularly with pigment. The centre of this spot served as the point of origin of a pedicle in shape like a large tent, and having a diameter equal to that of the optic disc. This pedicle begins to grow rapidly smaller, and in the shape of a cylindrical tube with very thin and transparent walls crosses the vitreous, and growing slightly larger again, stretches to the point of origin of the foreign body At this level the tube becomes absolutely black. Throughout the length of the inferior border of this membranous tube are found isolated particles of pigment forming a regular track, so that it shows the annexed pattern, of which we have been able to easily take a picture. All the rest of the retina is perfectly normal, and so are both the vitreous and chrystalline lens.



After putting the child to sleep with chloroform, M. Meyer enlarged with a slight cut of the scissors the conjunctival wound and easily seized with small forceps the extremity of the foreign body and withdrew it. The cap was rectangular in shape, 6½ mm. long by 1½ m.m., weighing about 1½ cgm.

The sequel of this slight operation being good, the child was sent home, its vision being normal and continuing so when seen some days later, but still presenting the curious alteration at the fundus of the eye.

To sum up: There had been the penetration of a metallic body through the external wall of the sclerotic and vitreous and lodgment within the deep membranes of the eye; then five months afterwards a reappearance of the foreign body at its point of entrance.

After discussing and rejecting the possible supposition that two foreign bodies had entered the eye through one wound, or that one body had become divided into two at its point of entrance, the author maintains that but one foreign body entered the eye; that this passed to the fundus and then gradually worked itself back to the point of entrance. In support of this position he calls attention to the pigmented track of the tube, and also to the experimental researches of Leber upon foreign bodies artificially introduced into the eyes of animals. — *Revue Générale d' Ophtalmologie*, June 30, 1887.

Book Reviews.

Sexual Impotence in the Male and Female. By William A. Hammond, M. D., etc., New York. Published by Geo. S. Davis, Detroit, 1887.

This new edition of a well-known book contains a chapter on impotence in the female that renders the book complete in its way. The book is divided into four sections, and treats of—

I. Absence of sexual desire.

II. Absence of power of erection, and of consequent intromission.

III. Absence of the power of ejaculating the seminal fluid into the vagina.

IV. Absence of the ability to experience pleasure during the act of copulation and at the time of the emission of the semen.

Three corresponding sections are devoted to impotence in the female.

REVIEWS OF PAMPHLETS.

—"Practical Thoughts for Physicians" is the title of a paper by Dr. G. W. H. Kemper, of Muncie, Indiana, which was read before the Indiana State Medical Society, May 10, 1887. The paper shows Dr. Kemper to be a clear-headed thinker as well as a good man, a happy combination that cannot occur too frequently.

—A very interesting and comprehensive description of "Intubation of the Larynx," is contained in a monograph by E. Fletcher Ingals, M. D., of Chicago. It is a reprint of two articles upon this subject that appeared in the *New York Medical Journal*, July 2 and 9. The author states that he has reports of 514 cases, in 134 of which, or 26.7-100 per cent., the patients recovered. He advocates the claims of this operation for preference over tracheotomy, and remarks, that while it cannot always take the place of tracheotomy, it has much to recommend it in the majority of cases.

—Dr. C. W. Moore, of San Francisco, Cal., in his "Review of the Advances of Surgery, Medicine and Pharmacy in the last Forty Years," notes a number of things in which there has been improvement since he began practice forty years ago. A few of these are thoracentesis, cerebral localization, systematic examination of the urine, hypodermic medication, treatment of vesico-vaginal fistula, treatment of aneurism by digital compression, experimental therapeutics, etc.

It is a very hopeful sign when an old practitioner sees not only what has been gained in the way of increased knowledge, but looks with bright anticipations to the future.

—We have received a reprint of a paper on "Suppurative Inflammation of the Antrum," read in the section on Otology, etc., of the American Medical Association, by E. Fletcher Ingals, A. M., M. D., of Chicago. The author recommends hot fomentations, local blood-letting and saline purgatives in acute inflammation of the antrum. Free exit must be given to the pus, preferably through a decayed tooth. If the teeth are all sound, the author thinks it advisable to draw the first molar. It is better to make a comparatively large opening, which is best done with a bone-drill. As a subsequent wash, the author recommends peroxide of hydrogen, ℥ss—℥j to f℥j.

The paper is to be commended for its clearness and avoidance of unnecessary technicalities.

—"Intelligence in the Van; the Beginning of the Beginning and the End of the End," is the title of an essay by Dr. Horace Dobell, of London. The writer says he made in 1861 in his "Notes for Future Work," this memorandum: "Is not the difference between what we call instinctive action and intelligent action simply that, in one case, the development of the necessary faculties and machinery is perfected before birth, and in the other after birth; and does not careful observation detect that even instinct is, in a small degree, further perfected after birth, just as intelligence is so perfected, in a larger degree?" Until 1886 he was unable to develop this thought. As the result of cogitations since then, the writer thinks "*the position of the material universe is intermediate between Potentia in its primordial state of diffusion and its final state of individualization.* From the birth of the first atom of matter, through all the wondrous forms in which it is presented to the senses of conscious beings, including those beings themselves, it is but the medium for the attainment of the eternal ultimatum of man, "when the spirit shall return unto the God who gave it."

It is but seldom that a physician in active practice can devote time to a study of the higher problems of metaphysics, and when he does, his point of view is generally materialistic.

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THE AUTUMNAL FEVERS.

The advent of the season during which these fevers prevail makes a discussion of the modes of distinguishing the various forms of them both appropriate and profitable. The most important paper recently presented to the profession was read before the meeting of The Association of American Physicians in Washington, by Atkinson, of Baltimore. The series of cases which the author recorded were undoubted cases of typhoid fever, which presented the single feature of continued fever alone. The specific symptoms were absent, and yet we take it the association agreed with him fully that no other diagnosis than typhoid fever would have been warranted.

This fever, with the various forms of malarial fever and the simple continued, form what we have to do with in this climate. Of the latter fever, Guitéras very happily named one variety, more common to the south and due to the heat, a continued thermic fever.

Of the differential diagnosis between malarial fevers, of remittent and continued type, and typhoid fever, much was said in the discussion. The usual characters of each are well-known and we therefore take occasion to refer especially to some recent methods of distinguishing them. This paper limits itself to an examination of the blood and the urine.

In malarial subjects the detection of the pigmented hyaline bodies, the crescentic bodies and the flagelliform microbe of Laveran in the blood, is all that is sufficient. A microscope with an amplitude of 800 to 1200 diameters, the former for the bodies, the latter for the germ is all that is necessary in the way of instruments. On the other hand in typhoid fever, examination of a drop of blood, previously stained, will reveal its characteristic micrococci while by the now well-known methods of culture, the features of this microbe are more readily distinguished.

Dr. Jacobi referred to the Diazon test for the recognition of typhoid fever. We much regret having to take issue with the Professor. We must say we thus far have found it of no avail, and we learn direct from Leyden of Berlin that the characteristic purplish discoloration of the urine, said by Dr. Jacobi to occur, in this test, in typhoid fever and tuberculosis only, is considered by the German professor liable to occur in all cases in which there has been much exhaustion. The absolute, the final test of the two varieties of fever, therefore, is the recognition of their specific cause in the blood.

A DIABETIC PATIENT IN SEARCH OF HEALTH.

Jules Cyr, who has written much and well on the subject of hepatic and renal diseases, has published a lively little brochure with the title: "Impressions and adventures of a diabetic," in which the experience of his patient with a variety of doctors and treatments is given. One of the most amusing

chapters, "La Médecine de Precision," is a good take-off on much that passes for scientific medicine, although the real counterpart of Cyr's "Polyclinic Institute," it might be difficult to find. Possibly the author aims the shafts of his satire at certain tendencies of the present day, rather than at any actual system of medical practice.

In the course of his travels, Sir Archibald Heartstone, the hero of the narrative, arrives at Artzburg-sur-l'Ammer, a university city *par excellence*, with its one hundred and fifty ordinary professors, twenty-five extraordinary, and a very respectable number of *privat docenten*. As for the number of pupils, it scarcely exceeded by fifty the whole number of teachers. Here was the famous Institut Polyclinique, with professor Von Humbug at the head; this institute Sir Archibald proposed to enter to be treated for his malady.

At the office of the institute he was required to pay for a week's board and treatment in advance, and sign a declaration bequeathing in the event of his death his body to the institute for purposes of autopsy. Before being introduced to the supreme medical authority of the institution for final judgment concerning his case, and suitable treatment, he must first be examined by a corps of resident experts. First came the professor of etiology, who after an exhaustive inquiry into the antecedents of the patient—his father had had a fall on the head, and he honestly had suffered a similar disaster; and his mother (a nervous invalid) had died from some hepatic trouble—formulated a provisional diagnosis: "*diabetes of a traumatic, hepatic, nervous, diathetic character.*" Then came three long hours of ordeal with the expert on symptomatology, who examined the thoracic regions with all the most modern apparatus of diagnosis, the cardiograph, the pneumograph, etc.; applied the sphygmograph to the wrist, then auscultated and percussed the chest, then finally tested the acuteness of the several senses and general sensibility by appropriate implements. Tired with this exhaustive examination, he was in poor trim for the visit of the urinologist, who examined his urine quantitatively, qualitatively, and microscopically, confirming the diagnosis of the etiologist, and left him to the charge of the expert in therapeutics, who enters to take notes as to the various treatments which he had undergone, and the effects experienced therefrom. Finally, the arch-professor himself comes upon the scene, with the inevitable spectacles, gold-headed cane and bald head, escorted by three resident physicians, one *privat docent* and two pupils. With exemplary gravity the findings of the several expert inquisitors were summed up in a few fitting phrases, and the medicinal treatment was comprehended in the one word *theriacum*, a very ancient and composite electuary whose principal ingredient is opium. Sir Archibald Heartstone thought this a most lame and impotent conclusion of so much scientific parade and flourish.

During his stay in Paris, our diabetic patient consulted a venerable physician, in whose description as given, it is easy to recognize the late Professor Bouchardet. Under the title of "An Original Consultation," Cyr gives the routine of daily exercises with bill of fare prescribed for his patient for one week. The diet table consisting of half a dozen or so, well chosen articles, was such as only a consummate connoisseur could write, and only a cook specially selected for the particular occasion could fill; it was beyond the capacity of any public restaurant. The exercises were to consist in digging the earth and removing the soil with a wheelbarrow, in a certain area of garden which had to be bought for the purpose; in marching for hours with a company of infantry; in several times making the ascent of the towers of Notre Dame, and in walking around Paris by the boulevards in the suburbs. It is not surprising that in attempting to comply with these requirements Cyr's patient found the road to health almost as arduous and beset with difficulties as did the hero of ancient fable the return from the cloud-encompassed regions of Tartarus; *sed revocare gradum, hic labor, hoc opus est.*

THE INTERNATIONAL MEDICAL CONGRESS.

Next week one of the most important events in the medical history of our country occurs: the meeting of the International Medical Congress, at Washington. There will then assemble in the Nation's capital two or three thousand members of the pro-profession from all parts of the United States, and Canada; with hundreds of eminent physicians, surgeons, and obstetricians from abroad. Washington has rarely known a more august and learned congregation of eminent professional men than that which will honor it during the first week in September, 1887.

The MEDICAL AND SURGICAL REPORTER desires not only to wish the Congress great success, but also to give hearty welcome to the foreign members of the profession, who have not found the sea too wide or its perils too great, but have come to our land with fraternal love and sympathy, and with lessons of instruction in the noblest of arts and the best of sciences. May their brief visit be not less happy to them, than it will be both happy and useful to those who rejoice in their coming, and may its memories be perpetual pleasure without any admixture of bitterness or of sorrow.

NOTES AND COMMENTS.

MODERN TREATMENT OF COMMON DISEASES.

Bronchial Catarrh.

The following prescriptions are taken from Ewald's *Handbuch der allg. und Spec. Arzneiverordnungslehre* (Berlin, 1887).

℞ Ammoniac.....gr. cxiiss
Aceti scillæ.....gr. ccxxv
Aq. fœniculi.....f℥ vj f℥ ij
Ext. glycyrrhizæ pur.....gr. cl
M. Sig.—Teaspoonful every ½ hour, in profuse purulent expectoration.

℞ Ammon. chlor.,
Ext. glycyrrhizæ pur.....āā gr. lxxv
Aquæ ad.....f℥ vj
M. Sig.—Dose f℥ ij–f℥ ss.

℞ Ammon. chlor.....gr. lxxv
Pulv. rad. alth. (Marshmallow)
Pulv. rad. glycyrr.....āā gr. ccxxv
Antimonii sulphidi.....gr. ix
M. Sig.—Take a teaspoonful in a small tea cup of water, 3 or 4 times a day.

℞ Decocti rad. alth. (Marsh.). f℥iv f℥ vss
Ammon. chlor.....gr. xviij
Tr. opii.....♏ viiss
Syr. senegæ.....f℥ ss
M. Sig.—Two teaspoonfuls every 2 hours.

℞ Ammon. chlor.....gr. lxxv
Rad. ipecac. pulv.
Ext. hyoscyam.....āā gr. viiss
Ext. glycyrrh. pur., q. s.
Ut. ft. pil. no. c. Sprinkle with pulv. rad. glycyrrh.
Sig.—Six pills three times a day.

℞ Apomorph. hydrochlor. cryst....gr. ¼
Aq. dest.....f℥ iiiss
Ac. hydrochlor.....♏ iv
Syr. simp.....f℥ ivss
M. Sig.—f℥ ss every ½ hour, as an expectorant.

℞ Morph. hydrochlor.....gr. ss
Apomorph. hydrochlor.....gr. ss–j
Acid. hydrochlor. dilut.....♏ viiss
Aquæ.....f℥ iv f℥ vss
M. Sig.—f℥ ss every 2–4 hours.

℞ Apomorph. hydrochlor.....gr. ⅛
Solve in
Aq. destil.....f℥ ss
Syr. marshmallow.....♏ cl
M. Sig.—Twenty drops every hour, as an expectorant in children. Teaspoonful as an emetic in children.

℞ Bals. peruv.....♏ xv
Myrrh.....gr. xxx
Ext. opii.....gr. v
M. Div. in pil. no. xxv.
Sig.—2–4 pills twice a day in ch. bronchitis.

℞ Pulv. rad. ipecac.....gr. viiss
Antimonii sulphidi.
Ext. senegæ.
Ext. conii.....āā gr. xv
M. Ft. pil. no. xxx. Sprinkle with lycopodium.
Sig.—1–2 pills 3 times a day in chronic bronchitis.

℞ Pulv. opii.....gr. iss
Pulv. fol. digital.
Pulv. rad. ipecac.....āā gr. iij ¾
Ext. hyoscyam.....gr. xxij
Pulv. rad. alth., q. s.
M. Ut. ft. pil. no. xxv. Sprinkle with lycopod.
Sig.—1 pill every 3 hours in spasmodic cough.

℞ Ext. ipecac.....gr. iss
Antimonii sulph.....gr. iij
Ext. senegæ.....gr. xv
Ammoniac.....gr. viiss
M. Ft. pil. no. xx.
Sig.—5 pills 3 times a day in ch. bronch.

℞ Flor. arnicæ.....gr. xxxviiss
Camph. (triturated).....gr. viiss
Ammon. chloridi.....gr. cl
Sacch. alb.....℥ ivss
M. Ft. pulv.
Sig.—Tablespoonful 3–4 times daily; expectorant.

℞ Aq. amygdal. amar.....f℥ iv ℥ vss
Syr. tolutan.....♏ ccxxv
Tr. opii camph.
Tr. scillæ.....āā ♏ iij
Ammon. carb.....gr. xv–xx
M. Sig.—Tablespoonful twice a day; to promote expectoration.

℞ Creosoti.....♏ viiss
Acid. acet.....♏ lxxv
Aq. destil.....f℥ v
M. Sig.—Dessertspoonful with 2–3 tablespoonfuls water put in an inhaler.

℞ Inf. rad. ipecac.....f℥ v
Ammon. chlor.....gr. lxxv
Sp. am. aromat.....♏ lxxv
Syr. senegæ.....f℥ iiss
M. Sig.—Tablespoonful every 2 hours, in bronchial catarrh of very weak persons without fever.

℞ Sp. am. aromat.....♏ xv
Inf. senegæ rad.....f℥ iij
Syr. fœnic.....f℥ vj
M. Sig.—Small teaspoonful every hour in bronchitis of infants.

℞ Sp. am. arom.....♏ lxxv
Aq. amygdal. am.....♏ cl
Aq. aurantii flor.....f℥ iss
M. Sig.—Teaspoonful 2–3 times a day, in chronic catarrh.

℞ Myrrh.....gr. xxx
Gum arab.....℥ ij
Rub with
Elder flower water.....f℥ iv ℥ vss
Adde
Ammon. chlor.
Ext. glycyrrhizæ.....āā ℥ j
Syr. bals. peruv.....f℥ ss
M. Sig.—Tablespoonful t. d., (Oesterlen).

℞ Sodii phosph.....℥ v
Solve in
Inf. fol. digital.....f℥ ivss
Syr. pruni virg.....f℥ v
M. Sig.—One tablespoonful, in bronch. with disposition to phthisis.

℞ Inf. juniper berries.....f℥ vj
Ext. juniperi.....℥ v
M. Sig.—Tablespoonful every ½ hour, in chronic bronchitis.

℞ Rad. ipecac.....gr. 1¼
Ammon. chlor.
Ext. glycyrrhizæ,
Sacch. alb.....āā gr. xxxviiss
M. Ft. pulv. no. vj.
Sig.—One powder every 2 hours.

℞ Opii,
Rad. ipecac. pulv.....āā gr. iij
Ext. hyoscyam.....gr. viiss
Ammon. chlor.....gr. xxij
Ext. glycyrrhizæ pur., q. s.
M. Ut. fiat pil. no. xxv.
Sig.—One pill t. d., and during evening and night 2 pills every 3 hours. In violent cough.

℞ Inf. rad. ipecac.....f℥ iij–f℥ vj
Morph. hydrochlor.....gr. ¾
Aq. amygdal. am.....f℥ v
M. Sig.—Tablespoonful every 2 hours, in bronchitis with spasmodic cough.

℞ Ol. terebinth.....f℥ iij
Acid. acet.....f℥ ss
Yolk of one egg.
Aq. rosæ.....f℥ iiss
Ol. lini.....℥ j
M. Ft. Liniment. Sig.—To rub the breast with, especially in bronchitis.

℞ Ol. terebinth.
Aq. destil.....āā f℥ iss
Yolk of one egg.
Ol. lini.....♏ lxxv
M. Ft. Liniment. Sig.—For different chronic affections of the chest. Similar to St. John Long's Liniment.

Cannabis Indica in Diarrhœa.

Frederick F. Bond, M.D., and B. E. Edwards, M. B., give the following resumé of the treatment of diarrhœa in India, by cannabis Indica: Dr. S. J. Rennie, Cawnpore, in the *Indian Medical Gazette* for December, 1886, calls attention to the value of Cannabis Indica in the treatment of dystentery. We wish to draw attention to its value in a similar condition, namely diarrhœa; especially in the type known as summer diarrhœa or English cholera. Attention was drawn to it in this connection by Dr. Turner of the Holloway Dispensary, in the *Lancet* (vol ii. 1866, p. 536: he says, "In ordinary diarhœa," (referring to summer diarrhœa presumably) "the formula" (mentioned in a previous part of his letter as very valuable in cholera, namely

℞ Tincturæ Cannabis Indicæ.....♏x
Spiritus chloroformi.....♏x
Tinturæ kino.....℥j
Aquaæ menthæ piperitæ ad.....℥j)

"in a modified dose, will be found very serviceable. Being connected with a dispensary where thirty to forty cases of diarrhœa presented themselves daily for treatment during the months of August and September, and where a great variety of remedies were tried, so great was the superiority of Indian hemp above the others, that the patients themselves got to know it, and invariably asked for the green medicine."

We have been in the habit of prescribing it in nearly all forms of diarrhœa with marked benefit, combined with medium doses of morphine. In summer diarrhœa the effects are very striking. There is no necessity to record cases, they are very much alike; the great depression, the frequent watery stools, the vomiting, and the cramp-like pains are very quickly relieved, the appetite speedily returns, and by the following or third day the cases are practically well, except for some weakness and debility. The formula we generally use for an ordinary adult is:

℞ Tincturæ Cannabis Indicæ....♏x
Liquoris morphinæ.....♏v vel ♏x
Spiritus ammoniæ aromatici...♏xx
Spiritus chloroformi.....♏xx
Aquæ ad.....℥j

To be repeated every 1, 2, or 3 hours according to circumstances. Directions: *No food for several hours, but a little brandy and water.* We have not seen one case run on to a fatal issue under this treatment.

It appears to act by increasing the astringent and anodyne properties of the morphine (the dose of morphine would have very little effect alone), by its stimulant effect on the nervous system, and by improving the appetite; thus enabling the system to quickly overcome the marked depression and exhaustion. Most remedies in this disease rather retard the return of the digestive functions, but from our experience Indian hemp markedly accelerates it. Indian hemp seems also to frequently counteract the bilious action of morphine, as well as the loss of appetite, and allows it to be given where it otherwise would not be tolerated.

In other forms of gastro-intestinal disturbance it is also valuable, probably for the same reasons. It was of marked use in a case of subacute gastro-enteritis, which had existed for a few weeks before it came under our care, in a girl aged 13 years, showing the following symptoms:—marked anæmia, which had gradually come on after the other symptoms; constant pain over the abdomen, especially in the epigastric region, increased on pressure and after food; tongue covered with yellowish-white fur; loss of appetite; vomiting at variable times after food of partly digested material; diarrhœa, six or eight stools in the day which were watery and green, containing partly digested food material; some rise in temperature—a little over 100° F. She was first treated with bismuth, then with effervescing mixtures, with no benefit; then with the cannabis mixture (modified to suit her age), and the symptoms very quickly subsided, the vomiting and diarrhœa were checked, the pain ceased, and appetite returned. By the end of the week all the symptoms had disappeared except the anæmia, which persisted for a short time longer.

In cases of tuberculous diarrhœa we have not seen much benefit, beyond a slight relief of symptoms for a short time, though we have not had sufficient experience in this type; nor in the excessive diarrhœa in typhoid fever.

The use of Cannabis Indica in diarrhœa is certainly not new, as the quotations previously given will show; and an old dispensing chemist informed us that some twenty years ago he knew it to be frequently prescribed; but probably from the introduction of many new remedies, and from good specimens of the drug having been not always attainable, it has with many other valuable remedies been temporarily forgotten. We can find no mention of it in modern works on medicine. —*Practitioner, July, 1887.*

CORRESPONDENCE.

A Correction.

EDS. MED. AND SURG. REPORTER:

In your issue of August 20th is a copy of a letter, "A visit to Dr. Hiram Corson," taken from the *N. Y. Medical Journal*, in which an error occurs in regard to the dose of the infusion of cimicifuga, giving it in teaspoonful doses three times a day. It should be from a tablespoonful to a wineglassful. The tinct. or fld. ext. can be used in teaspoonful doses.

The same error occurred in the paper from which the letter was taken, and I have already had it corrected there. Trusting you will do the same at a very early date,

I am very truly,

1527 Green St., MARY WILLITS, M. D.
Philadelphia, August 24th, 1887.

A Rare Dislocation.

EDS. MED. AND SURG. REPORTER:

Sirs: I met a dislocation which I think is quite rare. It is a dislocation of the upper end of the fibula backwards in a child sixteen months old. The child was sitting on the floor, when an older one fell from a bench above upon the legs of the little patient. The mother was not aware of the accident at the time, and several days later consulted me, saying that the child suddenly lost the power of locomotion. It was an extremely difficult diagnosis to make, since the fall of the older child had failed to attract any attention.

Hamilton (*Fractures and Dislocations*, in edition of 1880) says simple traumatic dislocations, which can only occur forwards or backwards, are very rare, and relates three cases of this accident.

It may be of interest in this connection to mention a very peculiar deformity which resulted from this dislocation. The extensor longus digitorum seemed to be completely paralyzed, giving to the toes a "dropped" appearance, like the drop wrist in lead poisoning. This deformity led me to examine the spinal column for the difficulty, and only accidentally did I discover the condition of the fibula. H. L. ROSENBERRY, M. D.

Mellonsburgh, Ohio, Aug. 18th, 1887.

EDITORS MED. AND SURG. REPORTER:

Sirs:—An article in a recent number of the REPORTER, giving an instance of the poisonous but curative effects of a dose of morphine, reminds me of a similar experience in the first year of my own practice.

A middle aged married woman, subject to occasional attacks of asthma of a severe type, sent for me, on the advent of an unusually hard attack, to afford her medical relief. The attack proved very stubborn as well as lasting, for after more than two weeks of unremitting effort on my part, aided by the counsel of an old practitioner, my patient was worse rather than better. On the evening in question, I found her in so much distress that I determined to relieve her or, as we say, "know the reason why."

My patient, also, begged for relief or death. I at once prepared a hypodermic of morphine, guessing at the quantity, which was not less than one-half grain, and probably about three-fourths of a grain, and injected it into the arm with the assurance that she would soon feel better. In about twenty minutes she became so wild and restless that I was alarmed. In ten minutes longer I summoned the family, for I believed her to be dying. Within forty-five minutes after I had given the injection, she was quiet and wanted to sleep, but as soon as she fell asleep the breath would stop, and in one or two minutes she would wake up in agony. I antidoted the morphine with belladona, and stimulated with wine of ammonia. About two o'clock in the morning she was so much better that I left her in care of another person, and lay down on a lounge in the room. In the morning and through the day she felt very comfortable, and was much surprised at the absence of her enemy the asthma. From this time forward improvement was steady and unbroken, and with the use of very little medicine, and that of a general character. She remained free from asthma until her complete recovery some five or six weeks after. I nearly poisoned, but a year later she was still free from the trouble. Moving away about this time I heard nothing of her for four or five years, when a friend reported that she was still comparatively free from her asthmatic trouble. I have always attributed her prompt recovery to the powerful impression made by the large dose of morphine on her system in some way such as to prevent the ready return of the trouble.

Occasional experiences in the administration of strong poisonous doses of medicines under marked conditions all go to show, that in some way not easily or clearly explainable, a profound shock to the nervous system reacting to the very centres, will often afford the relief sought, which otherwise has been found impossible of attainment.

I am not anxious to repeat the experience I had with my patient; still, under the same conditions, I would probably try, as a forlorn hope, the effect of a medical shock. Had my patient died, I have strong reasons for believing that the matter would have been settled in court.

In closing I wish to add, that I like the REPORTER better than ever under its new management. W. C. EUSTIS, M. D.

Flarmington, Minn., Aug. 17, 1887.

Remarkable Case of Typhoid Fever.

EDS. MED. AND SURG. REP.:

Horace F., aged 15, previously very healthy, was very well developed and muscular, weighing 160 pounds.

Began to complain on the 6th of August of slight weariness in his limbs, and lack of energy. Had a slight chill on the 7th inst., took to bed in the afternoon of the 8th. I was sent for on the morning of the 9th, and found his condition as follows: Pain in the left iliac fossa, with only slight tenderness in the right iliac fossa; loss of appetite; nausea, with occasional vomiting; heavily coated tongue, and diarrhœa. Pulse, 100; temperature, 102. I saw him on the 10th, and he presented the following conditions: Pulse 114, very feeble; temperature, 104. Nervous symptoms marked, answered questions at hap-hazard, talked incoherently, had incontinence of urine and fæces, and made efforts to get out of bed. His condition on the morning of the 10th was: Pulse, 120, very quick and feeble, scarcely perceptible; nervous symptoms more marked; had carphalogia, picking at the bed-clothes, and subsultus tendinum.

Digestive symptoms were: Tongue began to get dry in the center, and fissured; was protruded, with apparent hesitation and difficulty. Teeth and lips were covered with black sordes, as is usually seen in the 2d and 3d week. Had an attack of severe epistaxis the previous night.

I saw him on the evening of the same day, when the following conditions were noticed: Pulse, 130; temperature, 104¾; tongue very dry and fissured, the patient very delirious, talking and moaning constantly.

He had a profuse attack of epistaxis, lasting for an hour, during my visit, which was checked by applications of ice to the head

and nape of neck and insufflations of tannic acid. Took no nourishment any more, and at 11.30 he passed quietly away to another world.

Having never seen a similar case during an epidemic and through my 3 years of instruction at the University Hospital, I deemed the case worth reporting.

The remarkable features of the case were the abruptness of the attack, with very slight prodromic symptoms, the marked high fever and pulse in the first week, as also the marked nervous symptoms and death of patient on the 3d day of the disease.

DR. JOHN P. HILLEGASS.

Pennsburg, Pa.

A Correction.

EDS. MED. AND SURG. REP.:

Dear Sirs:—Dr. Cale's name has been misspelled in the clinical report of the Surgical Clinic of the St. Louis College of Physicians and Surgeons, reported in the issue of August 13th. Please to correct it in your next issue, and oblige.

LOUIS BAUER, M. D.

St. Louis, August 22, 1887.

NEWS AND MISCELLANY.

The International Medical Congress.

A correspondent of the *Med. News* (Aug. 27, 1887), sends the following sketch of each days' proceedings of the Int. Med. Congress:

In spite of the depressing influences of the heated term, busy preparations are going on by all concerned in the local management of the International Medical Congress. The office of the Secretary-general, Dr. Hamilton, shows tables filled with proof-sheets, titles and abstracts of papers, programmes, letters, etc., and medical men are constantly coming and going, seeking information on matters pertaining to the Congress. Dr. Hamilton showed me a closely printed pamphlet in small type, a proof copy, in which were embodied the titles of papers to be read and presented; it (the pamphlet) had already reached sixty-four pages, and the eleventh section, that of Ophthalmology, was not concluded, there being six more sections to be included, so that it would be impossible to give a fair idea of the material preparing without taking up a great deal of space.

So far, 338 foreign delegates are on the list as having expressed their intention of being in attendance.

The general sessions will be held at Albaugh's Opera House, which is centrally located on Fifteenth street, just below Pennsylvania Avenue, and looks out on the grounds of the President's House and Washington Monument. It ought to be cool and well ventilated. Its seating capacity is about thirteen hundred, including the balcony seats; the floor, comprising what is known as the orchestra and orchestra circle, seats seven hundred and eighty. The stage is moderately large, and the acoustics are pretty good. The Sections have also been provided with suitable accommodations.

The programme for the meetings is about as follows:

Monday, September 5. General meeting at Albaugh's Opera House, beginning at 11 A. M. Forenoon: Organization of the Congress, report of Secretary-General, report of Chairman of Local Committee, Address of Welcome by Secretary of State Bayard, Address by the President of the Congress, and other addresses. The Sections will meet at 3 P. M.

Tuesday, September 6, 10 A. M. General addresses: First, Dr. Austin Flint, of New York, on "Fever, Its Causes, Mechanism, and Rational Treatment." Second, Dr. Mariano Semmola, of Naples, Italy, on "Bacteriology and Its Therapeutical Relations. The Sections will meet daily from 11 A.M. to 1. P. M., and from 3 P. M. to 6 P.M.

Wednesday, September 7, 10 A.M. General addresses: First, Dr. P. G. Unna, of Hamburg, Germany, on "The Relations of Dermatology to General Medicine." Second, Dr. G. Fielding Blanford, of London, on "The Treatment of Recent Cases of Insanity in Asylums and in Private Houses."

Thursday, September 8, general meeting at 10 A.M. General addresses: First, Dr. A. Luteaud, of Paris, on "The Influence of Discoveries of American Surgeons on the Development of Gynecology in Europe." Second, Dr. Neudörfer, of Vienna, on "The Military Medicine of the Present and that of the Near Future."

Friday, September 9, general meeting at 10 A.M. for general business.

Saturday, general meeting at 10 A.M.; adjournment.

Although, as stated before, it is impossible to do justice to the material to be presented at this meeting, I cannot avoid noting a few papers on interesting subjects accompanied by the names of prominent medical men from abroad. Thus, in the section on *General Surgery*, William MacEwen, of Glas

cow, Scotland, will read a paper on "Brain Surgery." Edmund Owen, of London, has two papers on "The Surgery of the Hip-Joint: Paracentesis of the Articulation in the Early Stages of Disease of the Hip-Joint," and "The Distention of the Capsule in Disease of the Hip-Joint." Dr. Ollier, of Lyons, has a paper on "The Results of Resection in an Orthopedic and Functional Point of View." Dr. Leon Le Forte, of Paris, on "Gradual Dilatation of the Urethra." Neudörfer, of Austria, has several papers to present, dealing chiefly with problems in military surgery; he is Sanitary Chief of the Fifth Army Corps. Sir Thomas Longmore has a paper on the soldier's equipment for field dressing of wounds in time of war. Dr. Joseph Ewart, of London, has a paper on "Cholera," and Dr. Frederick Esmarck, of Kiel, a paper on "Field Dressing of Gunshot Fractures of the Lower Limbs in Connection with Transportation."

In the Section on *Obstetrics*, Prof. Emil Ehrendorfer, of Innsbruck, Austria, has a paper on "Puerperal Fever." Dr. Thomas More Madden, of Dublin, one on "Puerperal Septicæmia." Dr. M. Sänger, on "Conservative Cæsarean Section." Kirch, of Italy, on the same. Dr. Goelson Duncan, of London, gives a case of Porro's operation, and Prof. Lazarewitch, of St. Petersburg, a new normal (?) forceps. Lawson Tait has also a paper on "Tubal Pregnancy."

In other sections we note a paper by Prof. Rosenthal, of Vienna, on "Experimental and Clinical Observations of Cocaine." Dr. D. Hack Tuke, of England, on the "Care of the Insane." Dr. John Batty Tuke, of Edinburgh, on the "Legal Relation of Epilepsy." A paper on "Massage," by Dr. Charles Weber, in the Section of *Therapeutics and Materia Medica*, one by Dr. G. Ludvic Hirschfeld, of Paris, on the "Inefficacy of Ferruginous Injections," and one on the "Poison of the Cobra," by Dr. T. Gnezda, of Berlin. Dr. Dudley Wilmot Buxton, of London, gives "Experimental Studies in Asphyxia." In *Otology*, Dr. B. Loewenberg, of Paris, has a paper on the "Treatment of Tinnitus Aurium." In *Anatomy*, Reginald Harris, of Liverpool, on the "Bladder;" Dr. William Mitchell Banks, of Liverpool, on the "Wolffian Bodies." In *Diseases of Children*, Dr. E. Bouchut, of Paris, on "Tubage of the Glottis." In the Section of *Dermatology and Syphilography*, are papers by Mr. Jonathan Hutchinson, of London, Dr. P. G. Unna, of Hamburg, Dr. T. Colcott Fox, of London, and several other well-known foreign dermatologists. The Section on *Public and International Hygiene* is favored with papers by Thudichum, of London, Antoine Magnin, of France, Tommasi Crudeli, of Italy, Domingas Freire, of Rio Janeiro, Benjamin Ward Richardson, of London, Mapother, of Dublin, and others.—*Med. News*, Aug. 27, 1887.

The Rocky Mountains for Recreation.

Why do so few of our young men go West for recreation? There is no land where nature recreates a man as she does there. You literally renew your youth. The climate is invigorating beyond words. For nervously exhausted men, for weary brains, there is simply nothing to touch it. I have gone to the [Rocky] mountains thoroughly fagged out, unable to sleep well or eat well —life a burden, and work an impending horror. In a fortnight I have been eating as many meals a day as I could prevail on my men to cook, and have been glad to fill up chance spaces in my internal economy with raw bacon. Yes, many a time, after a monumental dinner, when we have gone into camp at five in the afternoon, have I eaten with relish that most lasting of all provisions—a piece of raw bacon—before turning in. It is true, some, at first, find the rarefied atmosphere of the mountains trying to chest or heart, and many also complain of loss of appetite and loss of sleep; but if the man is sound in limb and lung, and if he does not over-do it or over-exert himself at the very beginning, but does take regular exercise, in ten days or so all life seems to awaken within him; he may not sleep so long or so heavily, for he has probably camped at an altitude of eight or nine thousand feet (excellent camping-places are sometimes found at a height of ten thousand feet or over), and he does not need as much sleep as though he were at sea-level. He may puff and blow like a grampus as he faces a moderate hill; for he has scarcely realized yet that the atmosphere is so rare that he must boil his potatoes (if he is lucky enough to have any) for at least two hours, and he will do better if he boil them all the morning, and that he cannot, by twenty-four hours' boiling, make beans soft enough to feed to his horse. But he is growing younger, not older. The world of cark and care seems very far away, walled out by the heavy mists that roll up from the plains. What a fool he was to bother his soul, as he did, with a thousand useless things!—W. S. RAINSFORD, D. D., in *Scribner's Magazine* for September.

Low Water in Rivers.

A very earnest and extended communication was received by Governor Larrabee from an intelligent Iowa lady calling attention to the low state of water in our rivers—to the fact that few of the dams in the rivers had enough water in them to run over the "breast of the dam," and that in consequence the water was stagnant, covered with green slime, and disease-producing. As a remedy, she urged the Governor to order all the dams drawn off so that this sluggish water might be set in motion, and thereby purify itself—at least relieve the localities contiguous to the dams from their poisonous effluvia.

The communication was referred to the State Board of Health for reply. In the reply we called attention to the fact abundantly attested by careful observation, that the remedy proposed would really be more dangerous to the public health than the present condition. So long as the water covers the bed of these dams and rivers, the danger from malaria is infinitely less than it would be were these dams drained and the bottoms exposed to the hot sun, producing fogs by night, and still more poisonous exhalations by day. It is not the pond full of water so much as the pond drying or dried up that produces sickness.

We called attention to the further fact that the water in these dams though not apparently having any egress, must necessarily find some outlet whereby in a measure it purifies itself, since the water, continuously flowing in from above is just about as continuously and liberally flowing out below. Hence, we suggested that the dams be not ordered "drawn off"—but that rather we all petition the powers that be ordained to send "the latter" if not the early rain, that the "thirsty pools may rejoice."—*Bull. Iowa State Board of Health*, August, 1887.

Potable Water.

Inquiry is frequently made of this office if there is no way to ascertain whether or not water is safe for potable use, except by analysis. Two simple tests are here given, which will answer very well:

Fill a thoroughly cleaned pint bottle three-fourths full with the water to be tested; add to it half a teaspoonful of clean white granulated or crushed loaf sugar; stop the bottle with a new, clean cork or glass stopper, and set the bottle in the sunlight in a moderately warm room. If in twenty-four or forty-eight hours the water becomes cloudy or milky, it is unfit for domestic use. While the absence would not in certain cases prove the water to be good, the test is a good one for general purposes.

Another test is: Fill a common tumbler with the water, and put into it six drops of saturated solution of permanganate of potash, to be had at any drug store. If the water turns brown in an hour, it is unfit to drink.—*Bull. Iowa State Board of Health*, Aug. 1887.

Label Paste.

A writer in the *English Mechanic* gives the following formulæ:

1. Gum tragacanth, one ounce; gum Arabic, four ounces. Dissolve in water, one pint; strain and add thymol, fourteen grains, suspend in glycerin four ounces; finally add water to make two pints. This paste will keep indefinitely, and is suitable for labeling slides, glass bottles, wooden boxes, etc.

2. Rye flour, four ounces; powdered acacia, one-half ounce. Rub to a smooth paste with eight ounces of cold water, strain through cheese cloth, pour into one pint of cold water, and apply heat until thickening ensues; then cool, and add one ounce of glycerin and twenty drops of oil of cloves. This paste keeps well, and is suitable for both glass and wood.

3. Rye flour, four ounces; water, one pint; nitric acid, one dram; carbolic acid, ten minims; oil of cloves, ten minims; glycerin, one ounce. Mix the flour and water, strain through cheese cloth, and add the nitric acid. Apply heat until suitably thickened, and add the other ingredients when cooling. This is suitable for labeling bottles, tin or wooden boxes, and will not spoil.—*The Western Druggist*, August, 1887.

A Castor-Oil Draught.

A correspondent of the *British Medical Journal* communicates the following pharmaceutical hints. The first is for the easy administration of castor-oil:

Ol. ricini	℥iij
Tr. rhei co.	℥j
Ess. menth. pip. vel. cinnam.	♏v
Shake, and add	
Liq. magnes. bicarb. recent. ad	℥j

Five drachms of oil can be given in an ounce-and-a-half draught. He has always failed to make it in quantity, and says the ingredients should be mixed in the phial they are to be sent in. The B. P. solutions of morphine always form a deposit on the stopper or neck of the bottle; this can be

prevented by the addition of half a drachm of glycerin to each ounce of the solution. Ungt. gallæ c. opio, no matter how well rubbed up, is always gritty; this can be completely removed by rubbing the opium with a few drops of hot water.—*The Chemist and Druggist*, August 13, 1887.

Carnegie's Cure for Seasickness.

"Nobody need be seasick," explained Andrew Carnegie, the millionaire, "if he takes precautions and possesses a moderate degree of good health. This malady is often a bugaboo which people assume. The best medical authorities contend that the malady is an affection of the brain and spinal marrow rather than the stomach, and is after all, only the effort of the brain to accustom itself to the motion of the ship and the sound of machinery. It follows that will-power is a large factor in warding off the dreaded illness. Make up your mind to be well, and after you are under way take a small powder of bromide of soda, which your chemist will prepare in proper doses, put it in half a glass of water, and renew the dose whenever you feel the slightest symptoms of nausea. Your effervescent salts before breakfast will do the rest of the preventive cure.

"In any case, keep on deck as much as possible, dress too warmly rather than too coolly, and walk the deck an hour or two daily, rain or shine. Avoid over-eating the rich food with which ocean steamers are invariably stocked. There is no occasion to change your mode of life as to diet, because you are on the water, unless you have been extravagant; then let it be less so. Eat regularly, and aim to ingratiate yourself with your fellow passengers at table. You are all at the mercy of the treacherous waves. Surely, then, haughtiness or surliness is absurd; in fact, I would recommend three arbitrary ingredients for securing good, moral, mental, physical and social results, and these are good nature, will power, and bromide of soda."—*The Western Med. Reporter*, August 15, 1887.

Items.

—Yankee shaving soap is prepared according to the following: Take 3 pounds white bar soap, 1 pound Castile soap, 1 quart rain-water, ½ pint beef gall, and 2 fluid ounces oil turpentine. Dissolve the soap, first sliced in the water, by heat, add the other ingredients, stir until cool, then perfume with oil of bitter almonds or rose.—*The Western Druggist*, August, 1887.

—Mrs. Rose Terry Cooke says that if American women wish to be healthy they must learn to live in fresh air. She advises them to open their windows, wear flannel night-gowns, and take a jug of hot water to bed if they are cold, but never to sleep with closed windows; air all their clothes and their rooms daily, eat simple, wholesome food, wear boneless waists, button their skirts on them, and take the heels off their boots.

—"Only fifty years ago," says Sir Spencer Wells, "the average duration of human life in Great Britain was thirty years: to-day, according to statistics, it is forty-nine years. In fifty years the population has increased by eight millions. At least two millions of this increase may be put down as the fruit of improved sanitary and medical work, and of victory over preventable sickness."

Official List of Changes in the Stations ana Duties of Officers serving in the Medical Department, U. S. Army, from August 21, 1887, to August 27, 1887:

Major W. S. Tremaine, Surgeon, found incapacitated for active service by an Army Retiring Board, extension of leave of absence on account of sickness still further extended until further orders. Par. 9, S. O. 192, A. G. O., August 19, 1887.

Major John H. Bartholf, surgeon, leave of absence extended one month. Par. 7, S. O. 196, A. G. O., August 24, 1887.

Capt. Julius H. Patzki, Assistant Surgeon, granted leave of absence for one month. Par. 15, S. O. 195, A. G. O., August 23, 1887.

Capt. Washington Matthews, Assistant Surgeon, ordered to proceed to Phœnix, Arizona Ter., on public business, and on completion thereof to return to his proper station, S. G. O. Par. 21, S. O. 195, A. G. O., August 23, 1887.

Capt. Blair D. Taylor, Assistant Surgeon, granted leave of absence for 20 days, to take effect on or about August 31, 1887. Par. 7, S. O. 193, A. G. O., August 20, 1887.

1st Lieut. E. L. Swift, Assistant Surgeon, ordered to report in person to Commanding General, Division Pacific, for duty with troops at Round Valley, Indian Reservation. Par. 20, S. O. 195, A. G. O., August 23, 1887.

Official List of Changes of Stations and Duties of Medical Officers of the United States Marine Hospital Service, for the week ended August 27, 1887:

Surgeon P. H. Bailhache, granted leave of absence for thirty days. August 26, 1887.

Passed Assistant Surgeon H. R. Carter, granted leave of absence for twenty-seven days. August 25, 1887.

Passed Assistant Surgeon H. W. Yemans, resignation accepted, to take effect September 30, 1887, and leave of absence extended to that date. August 24, 1887.

Seaton Norman, granted leave of absence for six days, on account of sickness. August 27, 1887.